DOCUMENT RESUME

ED 170 488 CE 020 113

AUTHOR	Collett, Dave
TITLE	Curriculum Evaluation Project. Final Report.
INSTITUTION	Alberta Dept. of Education, Edmonton. Planning and Research Branch.
PUB DATE	78
NOTE	218p.; Not available in hard copy because of light print
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Academic Achievement; Career Planning; Curriculum Development; *Curriculum Evaluation; Curriculum Problems; *Demonstration Programs; *Evaluation Methods; Evaluation Needs; Failure Factors; Grade 11; Longitudinal Studies; Pilot Projects; *Program Effectiveness; Research Needs; Senior High Schools; Success Factors; *Vocational Education; Vocational Followup
IDENTIFIERS	*Alberta

ABSTRACT

A longitudinal study was undertaken in Alberta to pilot an evaluation model which was devised by Robert E. Stake and which could provide feedback on the merit and effectiveness of vocational education in the provincial high school curriculum. Using both student records and questionnaires administered to the students, information was gathered over an eight-year period ending in 1977 about 2,754 students who were in grade 11 in 1970. The study focused on the following areas: course selection and student programs, occupational achievements, student evaluation of present curriculum, and student recommendations for future directions in curriculum. Areas found to be in need of further research, development, and evaluation included (1) modern languages and fine arts; (2) dropout rates from business education, science, and second languages; (3) language laboratories and library research; (4) counselling services; (5) extracurricular programs; (6) experiential work programs and preparation for the world of work; and (7) the division of the school year into semesters. Besides identifying problem areas and indicating program effectiveness, the results of this study provided curriculum planners and resource allocators with guidance in future curriculum directions and emphasis. It was recommended because of the success of this pilot project that an ongoing evaluation program be established in the province. (ELG)

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CURRICULUM EVALUATION PROJECT

FINAL REPORT

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Summer 1978

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FOREWORD

The Curriculum Evaluation Project was a pilot of what could become an on-going systematic approach to gathering and organizing evaluative information about the high school curriculum from a provincial perspective.

As a guide to identifying different types of information that would be required, and to provide a framework for organizing the information after collection, the model advanced by Robert Stake was followed. Stake's model represents the process of judging the merit of educational programs through an elaboration of the general systems model.

While the intent of the study and the model chosen would emphasize the consideration of information from all sources, the piloting of the approach focused on the student-client. The major sources of information therefore were student records and three student questionnaires administered in 1971, 1973 and 1977. Some additional information was gathered from high school "A" card reports.

The study was limited to a single group of 2,754 students, selected randomly from the entire 1971 Grade XI provincial enrollment. Department of Education records provided educational information about these students, and evaluative feedback was provided by these students via questionnaires completed during their grade eleven year, one year after leaving high school, and five years after leaving high school.

The provincial perspective necessitated the gathering of information which would relate to factors influencing "schooling" of all the high school students within the province, although the information would be categorized so as to elucidate the differences between various types of groupings within the province. Information therefore focused on goals and goal-type statements, student programs, subject area objectives, school services and general learning activities. The student-clients involved were asked to evaluate each of the areas of schooling in the way in which they personally were affected. Accompanying educational and occupational achievements were also recorded. Evaluative information regarding what was their experience was supplemented on the third questionnaire by soliciting their views regarding what should be in the future.

This report deals primarily with the presentation of the information gathered, which in and of itself may be interesting and useful but should be interpreted with caution. The full usefulness of such information would only be realized through systematic gathering of such information on a periodic basis which would provide standards for comparison. Such monitoring would serve the educational system by providing an educational "audit" which would:

1. Provide indications of program effectiveness and subject area curriculum effectiveness and identify areas in need of more in-depth evaluation.

2. Give guidance to curriculum planners and resource allocators regarding future curriculum directions and emphasis.

A chapter by chapter summary of the results may be found in Chapter Nine.

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BACKGROUND AND INTRODUCTION

CHAPTER ONE

A REVIEW OF HOW THE PROJECT DEVELOPED

Background

On November 25, 1969, the first meeting of the Secondary Industrial Education Curriculum Committee passed a motion establishing an Ad Hoc Committee "to prepare a report outlining the criteria that could be used in the evaluation of vocational education." This action was taken in response to issues being raised at the time regarding the high cost of vocational education. This committee met December 19, 1969 and January 16, 1970. Membership of the committee included J. E. Gallagher (chairman), D. J. Collett, W. N. Pura, and F. Whittle. The report tabled by this committee discussed both long and short range plans for evaluation using the evaluation model of Robert Stake, with early emphasis on 2 cells: (a) observed antecedents and (b) observed outcomes. Time parameters for collecting data ranged from three to five years following the students' completion of the program.

In the spring of 1970 a second committee was established to develop and implement an evaluation plan following the above recommendations. Membership of the Industrial Education Evaluation Plan Ad Hoc Committee included: D. R. Young, H. C. Rhodes, D. J. Collett, D. Fehlberg, A.A. Day and J. D. Harder (chairman). This committee started development of a number of instruments for students, teachers, parents and administrators. Work focused on the student questionnaire which was mailed to schools in May 1971.

As the study proceeded, the scope of the project widened and in June of 1971 the committee was re-named the "Curriculum Evaluation Project Ad Hoc Committee and J. C. Smith was added to the committee. By September, 1971 initial tabulations of the student responses had been completed and plans laid for further analysis as well as the development of questionnaires for the other reference groups. While rough drafts of these other questionnaires were developed, none were administered. By September 1972, the Curriculum Evaluation Project had centered on feedback from students alone and plans were underway for the administration of a follow-up questionnaire to the same group of students that had completed the initial questionnaire. Some members of the committee had now left and G. Hawley and I. Hastings were added.

The follow-up questionnaire was developed by a group of three (G. Hawley, K. Sauer, and D. Fehlberg) and administered in the spring of 1973. By 1976 a third and final follow-up was to be administered and an agreement was made with D. J. Collett (now at the University of Alberta) to develop and administer the final follow-up questionnaire, complete the analysis and report on the entire project.[1]

Changing directions can be seen to pervade the project due to various factors, the more significant ones being:

(a) the length of time over which the development of the project extended,
(b) the significant changes made in committee membership,
(c) the extension of the scope of the project,
(d) the absence, at any particular point, of a clearly delineated group of problems along with the specific analytical methodology,
(e) the lack of sustained leadership and manpower required to carry out documentation, analysis and reporting.

Despite these problems significant steps had been taken toward a curriculum evaluation program which heretofore had not been undertaken. The various committees had come to grips with the essence of significant kinds of information that could aid future programs and curriculum decisions.

The Problem

While changes in committee membership and different pressures from outside had resulted in changes in direction, the general problem remained the same. An attempt was being made to start the development of a model which could provide evaluative feedback on provincial high school program curriculum and to pilot such a model. The original problem focused on the vocational education program, but it soon became apparent that not only was the same evaluation required of other programs, but indeed it was really impossible to carry out an adequate evaluation of one program without comparative information about the other high school offerings.

Objectives

In dealing with the general problem of piloting a province-wide curriculum evaluation model, the committee(s) established a number of explicit and implicit objectives which, over time, seemed to encompass the following:

---

[1] In addition to those mentioned above as members of guiding committees, several others should be cited for their contributions: L. Dawson, S. I. Forth, G. D. Kendal, T. C. Montgomerie, R. Nychka, D. Scheidegger. Secretarial, clerical and data entry duties were carried out by C. Collett, J. Dillon, L. Gordon and M. McDonald.

1. Provide comparative information about each of the general curriculum areas of the provincial high school program.
2. Provide an initial attempt at an organized system of longitudinal monitoring.
3. Provide a means whereby the comparative effectiveness of each program may be indicated, at least to the point of suggesting the need for a more in-depth evaluation in a subject area.
4. Through focusing on the student, to document:
    (a) from school records various student accomplishments and their relationship with the individual's school program,
    (b) from questionnaires the opinions of students (both while they were students, and later in retrospect) about their high school program.
5. To explore ways of grouping the student records and responses so that their individual high school programs would be similar, (i.e. to avoid mixing responses of individuals from diversely different school programs).
6. To limit the investigation to the level of general high school goals and subject area objectives, leaving specific objectives and curriculum for in-depth area evaluations.

AN EVALUATIVE PERSPECTIVE

As the earlier committees sought direction in approaching the problem, the evaluation model of Stake* seemed to present the most all-encompassing categorization of information and also included the idea of establishing standards from the collection of such information over time. In addition, Stake's model included judgement comparisons with "standards" as they were developed. Stake's model did however present problems, resulting in attempts to try and accomplish more than was possible given the resources and the early stage of development in trying to implement such an all encompassing program of evaluation.

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*Robert E Stake, "The Countenance of Educational Evaluation" in Taylor P.A. and Cowley D.M. (eds.) Readings In Curriculum Evaluation. Dubuque: Wm Brown Co., 1972.

The following is an attempt to place the Curriculum Evaluation Project within the provincial curriculum framework and to outline the structure and perspective of the project.

Figure 1 outlines a provincial model for curriculum evaluation of on-going programs. The current project is focused on two components: (a) are we achieving our goals and objectives and (b) are they the right goals and objectives?

To answer these two questions a "client-centered" approach evolved with the following features:

1. A periodic, systematic monitoring through a kind of client audit.

2. Scope of application would be province-wide.

3. Level of evaluation would be at the provincial curriculum level in terms of goals and objectives insofar as these provide leadership for what takes place in the schools.

4. Provide comparative information regarding each of the various subject areas.

5. Provide, on periodic application, a base of information from previous years with which to compare.

6. Recognize the particular nature of the high school curriculum in that each individual client selects from a wide variety of [illegible] an evaluation of the selection process.

The Model

Evaluation is primarily the gathering and organization of information in order to permit enlightened judgements about the effectiveness and merit of a program. The model presented by Stake provides one good framework for accomplishing this task. Figure 2 presents the Stake model of program evaluation. Within this model, the committee(s) decided to limit the first attempt, at a province-wide curriculum evaluation, to information gathered on and from the student. With the student being the main reason for schools, and the client of their offerings, this focus seemed the best, especially as other more developed methods of providing evaluative information covered areas of process and budget.

The model suggests three general categories of

Evaluation of On-Going Programs

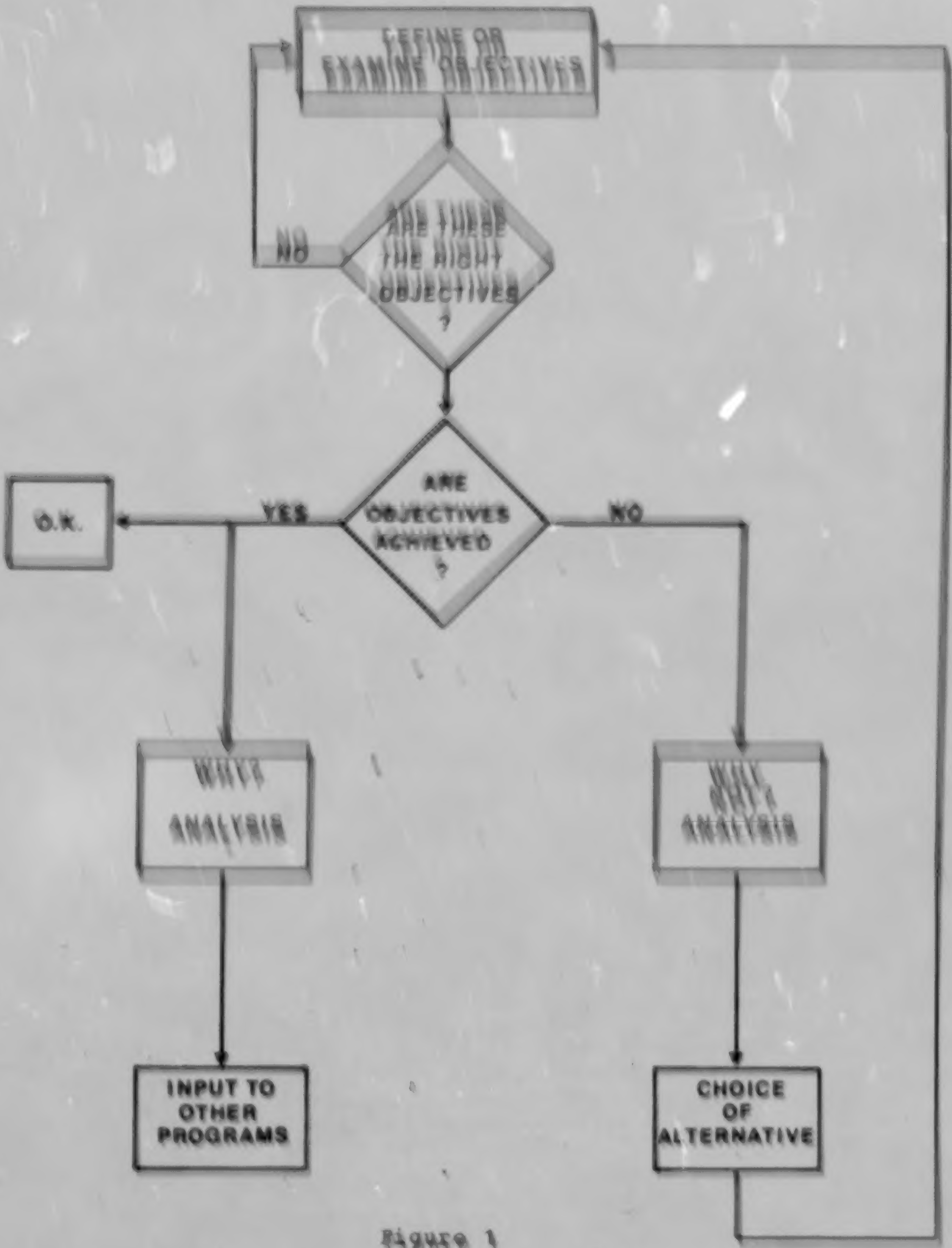

DEFINE OR EXAMINE OBJECTIVES
ARE THESE THE RIGHT OBJECTIVES ?
NO
ARE OBJECTIVES ACHIEVED ?
YES
NO
O.K.
WHY? ANALYSIS
WHY? ANALYSIS
INPUT TO OTHER PROGRAMS
CHOICE OF ALTERNATIVE

Figure 1

A REPRESENTATION OF THE PROCESS OF JUDGING THE MERIT OF AN EDUCATIONAL PROGRAM:

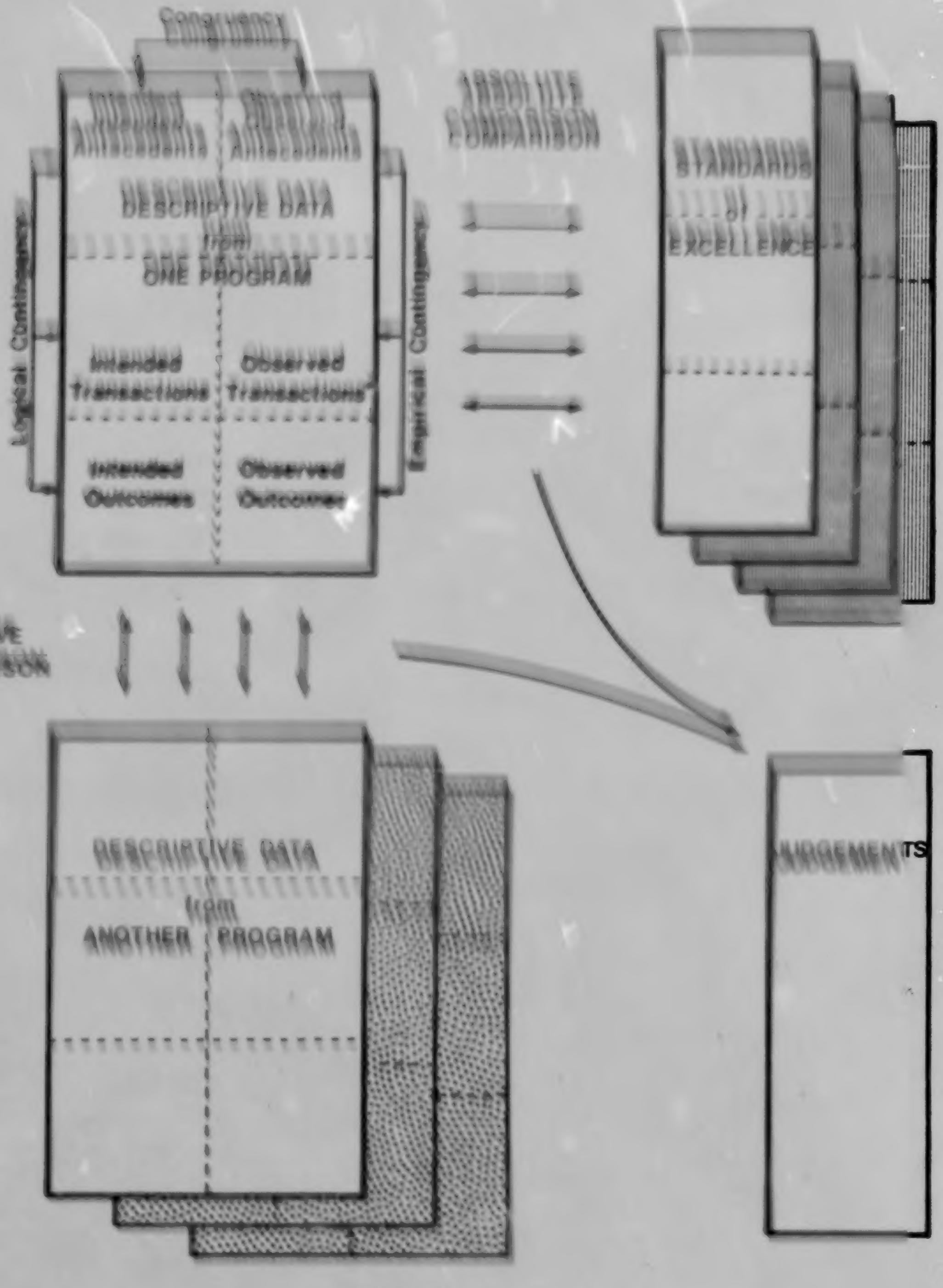

Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes
Logical Contingency
Empirical Contingency
ABSOLUTE COMPARISON
STANDARDS of EXCELLENCE
RELATIVE COMPARISON
DESCRIPTIVE DATA from ANOTHER PROGRAM
JUDGEMENTS

Figure 2

information (antecedents, transactions, and outcomes) and that information in each of these categories should further be divided into

(a) that which was intended,
and
(b) that which was observed.

The result is a six cell matrix for organizing descriptive information. The following are definitions of the terms used in Stake's model as interpreted with a student-client focus. A more complete interpretation of the model would include such things as: teacher information, parent and community information, evaluator observations of transactions, budgetary allocations etc.

Antecedents: That which is provided by and through the school in the way of context, background, resources, and participants (i.e. the setting).

(a) intended - as below but expected or anticipated (not dealt with);

(b) observed - school data, information about the incoming student, teacher information, parents and community information etc.

Transactions: Teaching-learning operations, that which the student-client experiences within the school setting.

(a) intended - as below but expected or anticipated (not dealt with);

(b) observed - course selection
programs experienced
teaching methods used etc.

Outcomes: All consequences of schooling.

(a) intended - what should be, our goals and objectives and the importance that we should place each.

(b) observed - what was the achievement of our goals and objectives?
- what unintended outcomes?

Sources of Information

In general the project attempted to gather information FROM and information ABOUT student clients who had experienced particular provincial curriculum. Sources of information would therefore be (a) provincial student records, and (b) statements and opinions from the client of the school curriculum.

Sources and type of information were as follows:

(a) Departmental Student Records

- observed antecedents: junior high ability and achievement scores, student age, sex;
- observed transactions: student programs;
- observed outcomes: educational achievement, grades etc.

(b) Departmental School Records

- observed antecedents: credits offered by school, enrollments, type of school, type of terms, region, number of teachers.

(c) First Student Questionnaire (Q1)-1971

- observed antecedents: father's education, mother's education, educational and occupational plans;
- observed transactions: teaching methods.

(d) Second Student Questionnaire (Q2)-1973

- observed transactions: teaching methods;
- observed outcomes: educational and occupational achievements.

(e) Third Student Questionnaire (Q3)-1977

- observed outcomes: educational and occupational achievements, goal and objective achievement ratings;
- intended outcomes: importance ratings on goals and objectives.

The Population and Methodology

The population selected for piloting the model was the entire Grade XI student body enrolled in the 1970-71 school term. Since we would require background information on each student within the evaluative model, all those students for whom there was not a complete Grade IX and X record were deleted. A random sample of the remaining 30,000 plus students was drawn giving an initial sample size of 2754.

A time-line along with the information collected is presented in Table I, which shows the information gathered and analyzed extending over an 8 year period ending in 1977.

An outline of the information selected and generated from student and school records is presented in Appendix A. Copies of each of the three student questionnaires are provided in Appendix B, C, and D respectively.

TABLE I

PROJECT TIME LINE

Year	Grade Level	Information Collected
1968-69	Grade IX	Grade nine achievement and ability scores.
1969-70	Grade X	High school courses taken and grades achieved.
1970-71	Grade XI	Initial student questionnaire administered (Q1).
1971-72		
1972-73	(most had left)	Second questionnaire administered (Q2).
1973-74		
1975-76		High school courses taken and grades achieved, updated.
1976-77		Third and final questionnaire administered (Q3).

Methods used in administering the questionnaires were:

(a) Q1: Initial student questionnaire - mailed to each high school in the province, with a request that the questionnaire be administered and returned.

(b) Q2: Second student questionnaire - mailed to individual home addresses.

(c) Q3: Third student questionnaire - mailed to individual's last known (home) address with a request that the questionnaire be forwarded. Return postage was guaranteed, and for those returned undeliverable, searches were made of directories. Phone calls were made in attempts to update addresses. Of 495 returned undeliverable, 313 were remailed under a new address.

In each case responses were key-punched and set up in computer files which were merged for analysis with information selected and generated from Department of Education student records.

Questionnaire Returns

Of the initial sample of 2754, 2224 of the first questionnaire were returned for an 80% return. Reasons for less than 100% return under the conditions for administration fell into three categories:

1. Some students had dropped out of school between the time of sample selection and questionnaire administration.

2. Some students were absent on the day or days that each school administered the questionnaire.

3. A very few schools received the questionnaires during an exam week when regular attendance was not compulsory resulting in poor returns from those schools.

The second questionnaire was, through error, mailed only to the 2224 persons who had responded to the first questionnaire. Of these, 1340 questionnaires were returned for a 49% return (60% of those mailed).

The third questionnaire was mailed to the original sample of 2754, of which 740 (27%) were returned. Five were returned by relatives indicating the ex-students were deceased, 16 were returned with the identification marks removed or too late for processing leaving 719 (26% usable returns of the original 2754).

Representativeness Of The Respondents

Although returns are considerably lower for the second and third questionnaire, comparisons of many of the antecedent variables for those students originally selected, and those subsequently responding to each of the questionnaires show a very high similarity. Antecedent variables dealing with both ability and academic achievement show slight shifts toward the higher levels. The distribution of antecedent variables dealing with school size, type, and region show no difference for the respondents from one questionnaire to the next.

For more detailed information on the question of representativeness of the sample, the reader is referred to the analysis of findings reported in the next chapter.

Analysis

Methods used in the analysis of information and in various categorizations in a number of cases were varied and complex. Hence the particular methods used will be explained in the respective parts of this report prior to reporting the results.

Structure Of The Report

The organization of the remainder of the report follows roughly the Stake model. Chapter 2 deals with School Offerings And The Incoming Student (observed antecedents), Chapter 3 deals with Course Selection And Student Programs (observed transactions), Chapter 4 reports on Career Plans (observed antecedents) and Achievements (observed outcomes), Chapter 5 reports on Educational Achievements (observed outcomes), Chapter 6 covers Occupational Achievements (observed outcomes), Chapter 7 focuses on Client Evaluation of goals and Objectives, (observed outcomes), Teaching Methods and Services (observed transactions), Chapter 8 outlines Future Directions (intended outcomes), Chapter 9 provides Summary and Recommendations.

SELECTED UNSOLICITED NOTES ATTACHED TO RETURNED QUESTIONNAIRES

In this area to get the right answers you must ask the right questions! I'm not sure if this has been fully accomplished, however I'm confident the exercise will keep someone busy. A good start I guess, would like to see more.

This questionnaire itself is an example of our present schooling system - computerized with no room for personal comments.

Just a note to go with my questionnaire, although I realize computers can't read. I would like you to realize that I have not attended high school for five years and this will influence my answers because I know high schools have changed since then.

I found your questionnaire quite extensive and thorough. It was a little tough on some questions to find the right reply, but I hope my answers will help. Please take into account I attended a small town school where a lot of the courses mentioned were not offered. Our guidance counsellors were our teachers.

I found this questionnaire quite frustrating in that I could not expound on the choices I made, and there were some choices that I felt needed more verbalizing to get a true response to the question.

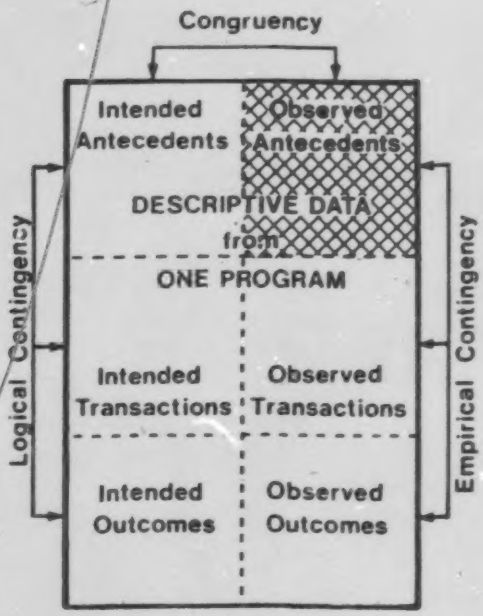
This questionnaire shows a lot of repetition, although you have your reasons for doing so. It has been a pleasure helping you, being a part of the evaluation program. If I could be of help at any other time, I would be glad to do so.

I hope you realize this questionnaire seems to be based on the assumption that our society is basically static - that capitalism and its social institutions are here to stay, and that the values of this society must be reproduced.

I have just completed your questionnaire concerning the evaluation of high school programs in Alberta schools, and found your questions immensely interesting and relevant. As a former student of an Alberta school, I am most keen in obtaining any further information from you concerning the study which you are undertaking.

SCHOOL OFFERINGS &

INCOMING STUDENT


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Logical Contingency
Empirical Contingency
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes

CHAPTER TWO

THE SCHOOLS & THE INCOMING STUDENTS

Prior to considering evaluative information about provincial high school curriculum, it is important first to consider antecedent information about the schools through which the curriculum is presented to the student-client, and then some antecedent information about the student prior to enrolling in the high school.

Since the design of this project is the pilot of a longitudinal study rather than one of experimental research, it is primarily descriptive in nature. The significance of any particular piece of information must be considered within the whole, and would increase in significance as similar information became available for subsequent but similar groups of students. To this end the following discussions provide considerable cross-referenced information about the student-clients and schools involved.

THE SCHOOLS

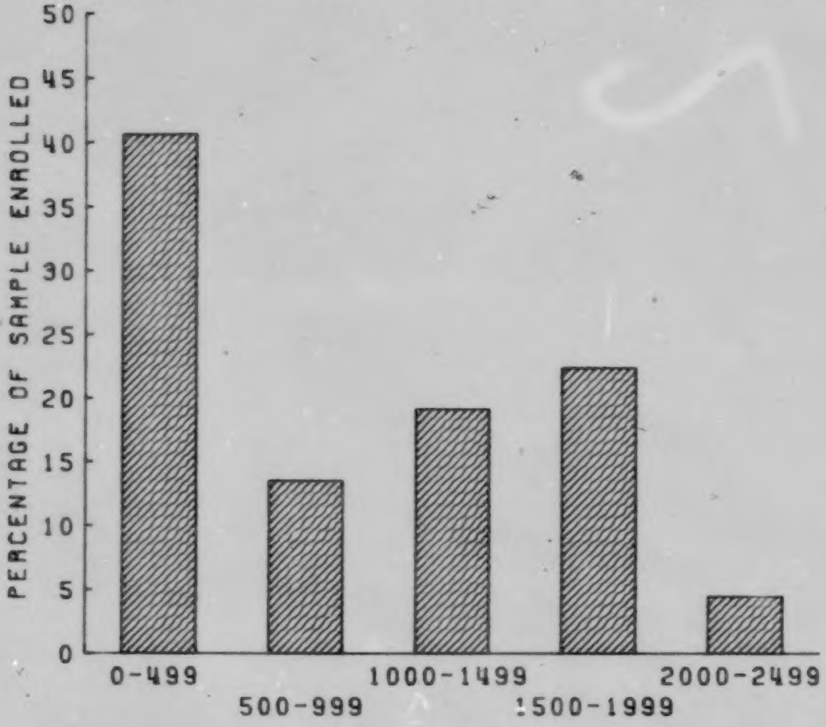
The province-wide sampling of grade eleven students outlined earlier drew students from 226 different schools. Information taken from the Department of Education "Form A" cards provided the following information about the schools involved in this evaluative study. This information relates to the 1970-71 school year.

School Size

Three measures of school size were recorded and attached to each individual student's record:

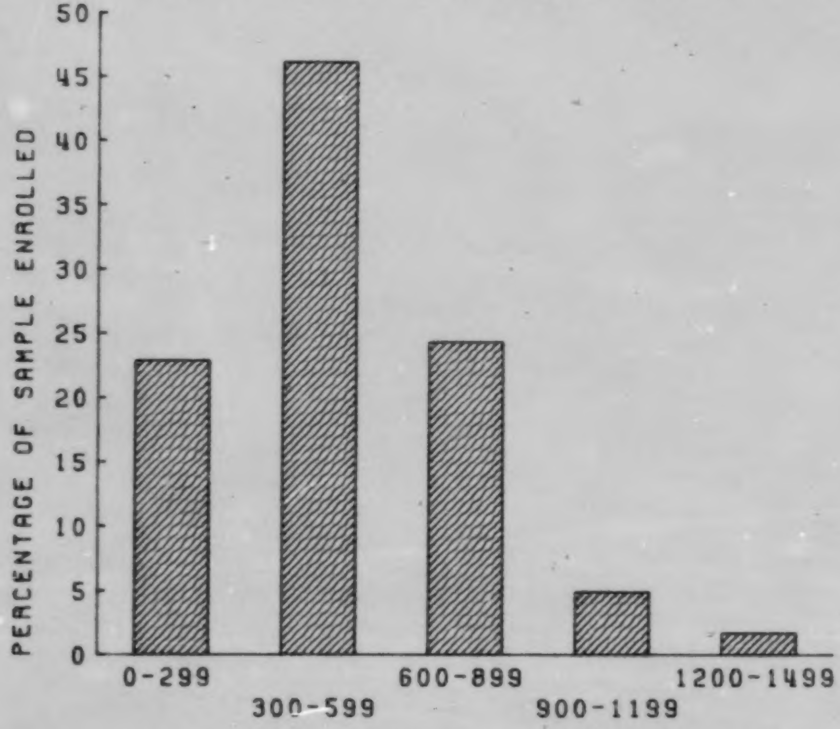
(1) Student enrollment shows a wide range of school sizes, with high school populations ranging from 20 to 2500 students, the average (mean) school enrollment at 907. Forty percent of the student sample came from schools of 500 or fewer students. Figure 3 shows the proportionate distribution of the student sample into 5 enrollment catagories.

(2) Credits offered also shows an extreme disparity in the range of curriculum offerings available to the students within the province. The number of high school credits available for selection ranged from less than 100 credits to over 1200 credits. On the average, students selected from approximately 498 credit offerings. Figure 4 shows the distribution of the student sample. Seventy percent of the students attended schools offering 600 or fewer credits.



STUDENT DISTRIBUTION BY SCHOOL SIZE (ENROLLMENT)

Figure 3



STUDENT DISTRIBUTION BY SCHOOL SIZE (CREDITS OFFERED)

Figure 4

(3) Number of teachers. The average student attended school with approximately 47 teachers, with the distribution of students as shown in figure 5.

School Type

Two statistics were recorded as to the type of school that each student attended. Schools were categorized according to the type of "term" offered and whether or not they offered business and/or vocational subjects.

(1) The type of term offered by each school was divided into three categories, with the proportion of students attending each type as follows:

(a)	ten-month term	- 27%
(b)	semestered	- 71%
(c)	tri-mestered or other	- 2%

(2) The type of course offerings, with the proportion of students attending were categorized as follows:

(a)	academic program only	- 14%
(b)	academic and business education programs	- 31%
(c)	academic, business, and vocational education programs	- 55%

Region

Participants were categorized as to region on the rural-urban continuum. Three categories were used; rural, small urban and large urban. The proportion of students attending schools in these locales follows:

(a)	rural (less than 5,000 population)	- 45%
(b)	small urban (5,000-50,000 population)	- 7%
(c)	large urban (over 50,000 population)	- 48%

Pupil-Teacher Ratio

Students involved in this study came from senior high schools with a fairly wide range of pupil to teacher ratios. The average pupil-teacher ratio was approximately 17 to 1. Figure 6 shows the distribution of students according to the pupil-teacher ratio of the schools they attended. Significant numbers attended schools with the ratios greater than 20 to 1 (22 percent) and with ratios lower than 15 to 1 (18 percent).

Number of Counsellors

Records were checked as to the number of counsellors (not full-time equivalents) identified at each school.

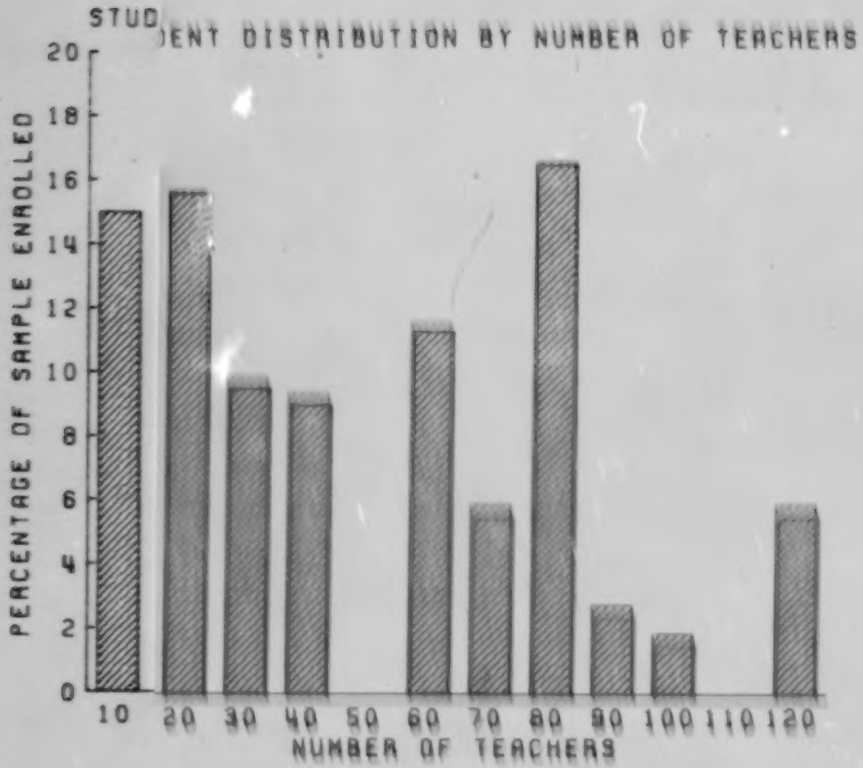


Figure 5

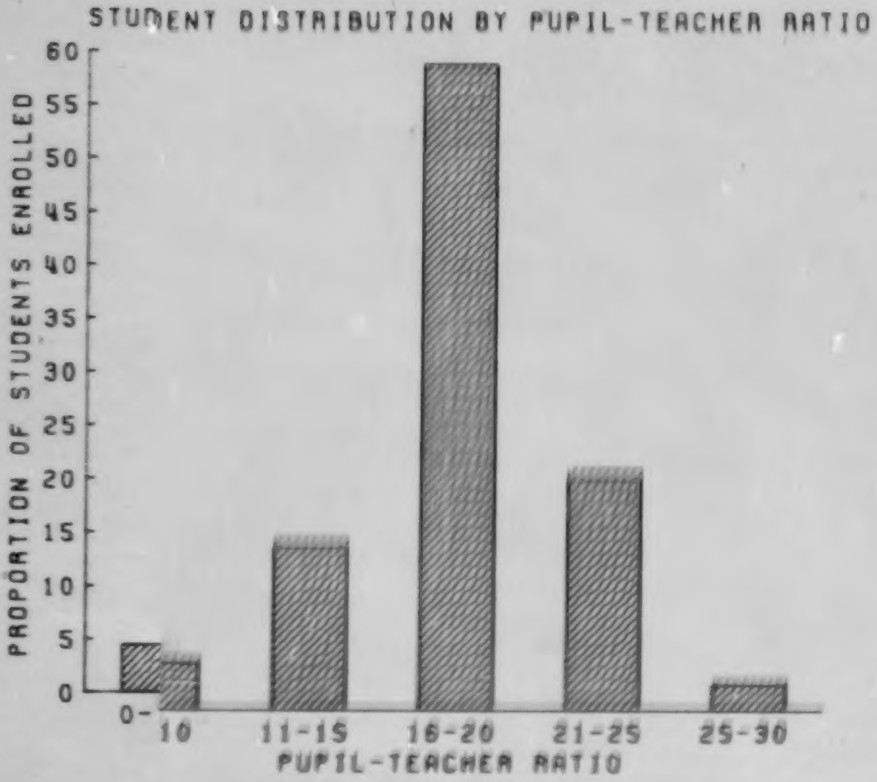


Figure 6

Schools ranged from 0 to 8 counsellors. Percentages of the student sample were as follows:

(a) zero counsellors = 30%
(b) one counsellor = 17%
(c) two counsellors = 15%
(d) three counsellors = 10%
(e) four counsellors = 12%
(f) five counsellors = 7%
(g) six counsellors = 4%
(h) seven counsellors = 3%
(i) eight counsellors = 2%

While the number of counsellors in each school was certainly related to the size of the school and the number of students, it is of interest that thirty percent of students had no access to designated counsellors.

Representativeness of Respondents According To School Characteristics

Due to a relatively low (26%) response on the third student questionnaire, concern existed as to the extent that those respondents may represent the total sample. As a check to see what (if any) biases may result from the marked reduction in the percentage of responses from questionnaire one through to questionnaire three, cross-tabulations were prepared on some of the student and school characteristics from one sample to the next. Table II shows comparative information dealing with school size, type of school, region and type of term. In each case selected statistics are shown for the students who responded to each of the questionnaires. The data indicate a shift toward a higher proportion of respondents from the smaller, academic-business, rural, 10 month term school. This shift is greatest for Q2 with the respondents to Q3 more closely representing the original sample on school variables. One explanation for the shift in Q2 is the fact that in that case questionnaires were not mailed to the total original sample.

THE STUDENTS

Selected antecedent information was collected about the incoming student. Departmental records provided SCAT ability scores and Grade IX achievement scores, as well as age distribution and sex. The first questionnaire provided student responses to questions of: (a) self-perception of intelligence and (b) the level of education achieved by their father and mother, as one measure of socio-economic status. Questions regarding educational and occupational goals were also responded to, and are discussed in subsequent chapters.

TABLE II

COMPARATIVE SCHOOL STATISTICS FROM THE THREE STUDENT QUESTIONNAIRES

Enrollments	Maximum Value	Minimum Value	Group Mean	Standard Deviation
Sample	2499.0	19.0	907.6	665.0
Questionnaire 1 (1971)	2499.0	19.0	844.9	635.8
Questionnaire 2 (1973)	2499.0	20.0	839.2	623.6
Questionnaire 3 (1977)	2499.0	20.0	877.1	663.7

Credits Offered	Maximum Value	Minimum Value	Group Mean	Standard Deviation
Sample	1227.0	70.0	487.9	262.1
Questionnaire 1 (1971)	1227.0	70.0	481.2	260.9
Questionnaire 2 (1973)	1227.0	70.0	478.6	253.2
Questionnaire 3 (1977)	1227.0	71.0	480.6	250.0

Type of School	Academic	Academic & Business	Academic Business Vocational
Sample	13.7%	30.8%	55.5%
Questionnaire 1 (1971)	15.5%	30.9%	53.7%
Questionnaire 2 (1973)	15.2%	30.9%	53.9%
Questionnaire 3 (1977)	12.7%	32.0%	55.3%

Urban/Rural	Rural	Small Urban	Large Urban
Sample	44.8%	7.1%	48.2%
Questionnaire 1 (1971)	48.4%	7.8%	43.8%
Questionnaire 2 (1973)	47.8%	9.2%	43.0%
Questionnaire 3 (1977)	47.1%	7.7%	45.2%

Type of School Term	10 Month	Semestered	Tri-mestered or Other
Sample	27.3%	70.7%	2.0%
Questionnaire 1 (1971)	26.6%	71.1%	2.3%
Questionnaire 2 (1973)	26.3%	71.3%	2.3%
Questionnaire 3 (1977)	28.5%	69.5%	2.0%

Age and Sex

Students on entry into high school ranged in age from 12 to 18 years of age. Very little difference was noted in the range and distribution of the respondents for each of the three questionnaires on the age variable. Table III shows the mean year of birth and distribution for the original sample and each of the groups for Q1, Q2 and Q3.

TABLE III

AGE (YEAR OF BIRTH) DISTRIBUTION

	Mean	Distribution (percentage)					
		51	52	53	54	55	56
Sample	53.8	.5	3.4	16.8	72	7.0	.1
Questionnaire 1 (1971)	53.8	.4	3.0	16.1	73	7.2	.2
Questionnaire 2 (1973)	53.9	.3	2.1	13.6	75	8.0	.1
Questionnaire 3 (1977)	53.9	.3	2.6	9.0	80	7.5	.1

As expected, the sex of the respondents was pretty evenly split. Figure 7 does show however, that there is a notable increase in female responses for the second questionnaire. No explanation is evident for this shift. In addition, it was expected that a somewhat lower return of questionnaires from females would be the case for Q3 due to possible difficulties in following up name changes, yet we received a slightly higher percentage of female returns than from the original sample.

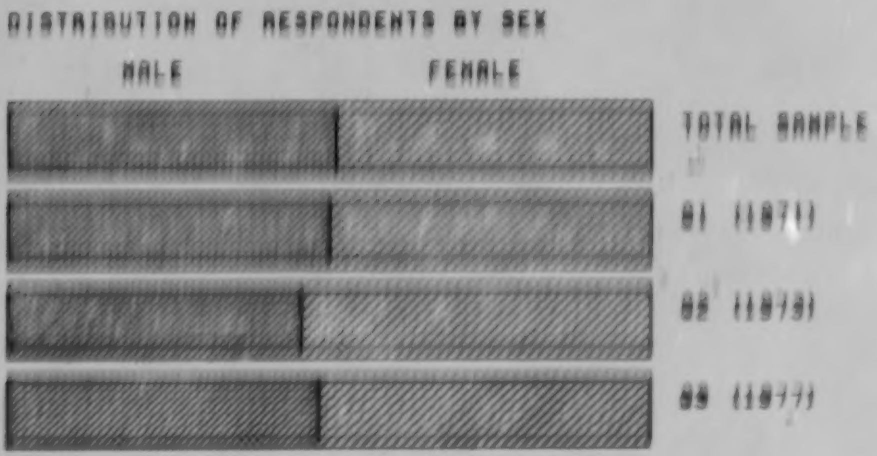


Figure 7

Parents' Educational Level

As one indication of socio-economic status, students were asked on Q1 to indicate the level of education attained by both their father and mother. Table IV presents the percentages reported at each educational level. Over 60% reported their parents' educational level at high school or lower.

TABLE IV

PARENTS EDUCATIONAL LEVEL

Educational Level	Percentage Father	Percentage Mother
Junior high school	32.7	25.2
High School	28.5	39.4
Institute or College	8.2	13.5
University	10.3	6.4
Don't Know	18.8	15.0

Self-Perception of Intelligence

Responses to item 5 on Q1 (shown in Table V) show a "normal" distribution of responses on self-perception of intelligence. A correlation with SCAT ability ratings however produced a low correlation of +0.42.

TABLE V

SELF-PERCEPTION OF INTELLIGENCE

In your own estimation, how smart are you in relation to students of your own age? (check one)	No	%
a. Superior	47	2.11
b. Slightly superior	435	19.55
c. Average	1609	72.31
d. Slightly inferior	118	5.3
e. Inferior	9	.4

Representativeness of Student Antecedent Characteristics

Cross-tabulations on student characteristics, similar to those reported earlier on school characteristics, showed slight biases toward a higher proportionate response from students of higher ability and achievement ratings over time. Figures 8 and 9 along with Table VI present comparative information for Verbal, Quantitative and Total SCAT scores along with Grade IX departmental averages for each of the three questionnaires compared with data from the total sample. On each subsequent questionnaire a slight increase in the proportion of students from the higher brackets are seen to respond, although in many cases, the differences would not be statistically significant.

TABLE VI

COMPARISONS OF STUDENT ABILITY AND ACHIEVEMENT SCORES
(Original Sample And Each of 3 Questionnaire Responses)

Total SCAT (Percentiles)	Maximum Value	Minimum Value	Group Mean	Standard Deviation
Sample	99.0	1.0	51.2	28.1
Questionnaire 1 (1971)	99.0	1.0	52.9	28.1
Questionnaire 2 (1973)	99.0	1.0	56.6	27.8
Questionnaire 3 (1977)	99.0	1.0	56.7	27.2

Grade 9 Average (Departmental Grades)	Maximum Value	Minimum Value	Group Mean	Standard Deviation
Sample	81.0	2.0	48.7	10.9
Questionnaire 1 (1971)	81.0	2.0	49.5	10.9
Questionnaire 2 (1973)	78.0	2.0	51.1	10.9
Questionnaire 3 (1977)	78.0	2.7	51.3	10.3

SCHOOL-STUDENT CROSS REFERENCE INFORMATION

Attempts were made to determine the extent of any differences of student characteristics when referenced to specific school characteristics.

School Size

An analysis was conducted of each of the student antecedent characteristics identified earlier with school size (enrollments). Table VII presents this information showing mean scores for verbal, quantitative and total SCAT scores as well as grade nine Departmental averages.

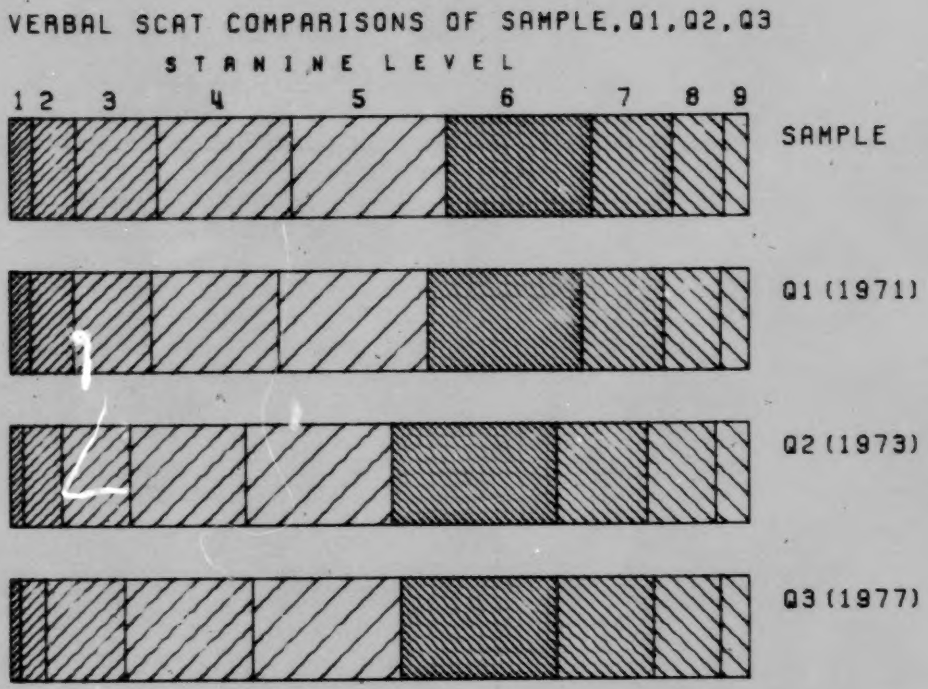


Figure 8

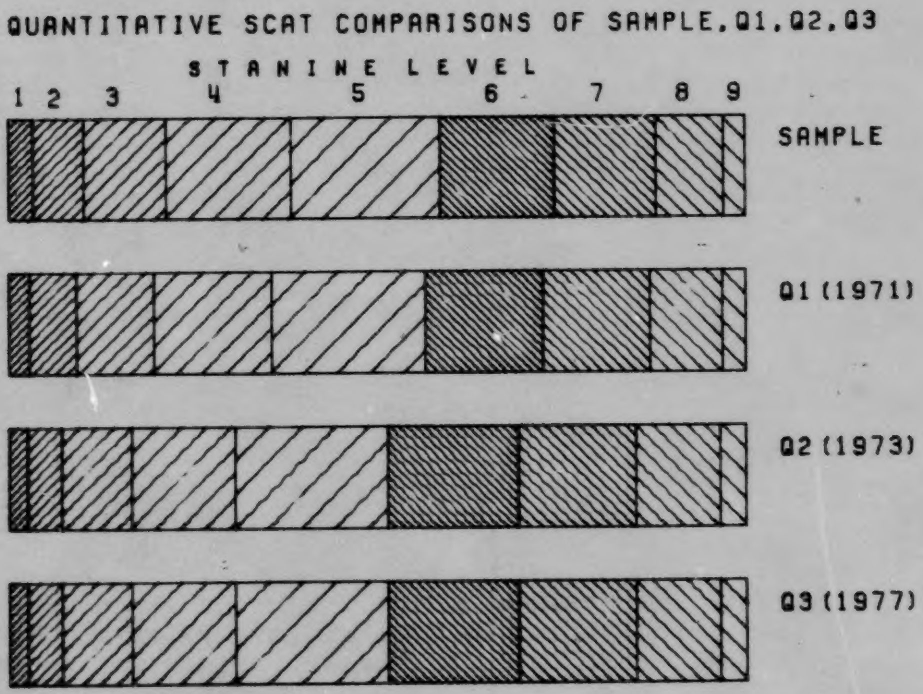


Figure 9

TABLE VII

MEAN STUDENT SCORES OF ABILITY AND ACHIEVEMENT SCORES FOR EACH SCHOOL CATEGORY

School Enrollments	Verbal Stanine	Quantitative Stanine	Total Percentile	Grade 9 Percentages
Category One (Up to 499)	4.94	5.07	49.90	47.79
Category Two (500 to 999)	4.99	4.97	49.49	48.62
Category Three (1000 to 1499)	5.37	5.34	55.79	50.30
Category Four (1500 to 1999)	5.16	5.19	53.22	49.69
Category Five (2000 to 2499)	4.90	4.84	46.69	48.72
Total Sample	5.06	5.09	51.20	48.70

Student ability and achievement scores appear somewhat higher for categories three and four. Schools in the 1000 to 1999 range seemed to enroll students with both higher ability and achievement than the smaller or larger schools. Results to be reported later regarding High School Achievement for this sample must be interpreted with this in mind.

School Type and Region

The ability and achievement scores of the incoming students as they represented the three school types differed little. Grade IX SCAT and Departmental exam averages are presented in Table VIII.

Some slight regional differences were found however, with Table IX showing students entering small urban schools with slightly higher ability scores than their rural or large urban counterparts.

TABLE VIII

ABILITY & ACHIEVEMENT SCORES OF STUDENTS ENTERING EACH SCHOOL TYPE

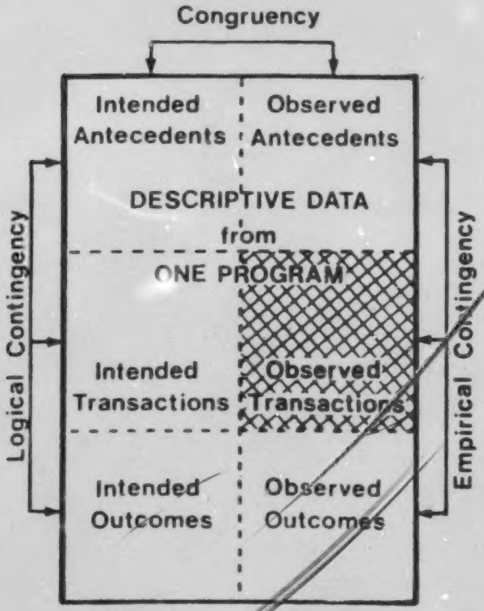
	Mean Scores of Students			
School Type	Verbal SCAT Stanine	Q-SCAT Stanine	Total SCAT %-iles	Grade IX Deptls %-ages
Academic	4.77	5.07	51.2	48.6
Academic & Business	4.95	5.02	51.2	48.9
Academic & Business & Vocational	5.00	4.96	51.3	48.7
Total Sample	5.05	5.09	51.2	48.7

TABLE IX

ABILITY & ACHIEVEMENT SCORES OF STUDENTS ENTERING SCHOOLS OF EACH REGION

	Mean Scores of Students			
School Region	Verbal SCAT Stanine	Q-SCAT Stanine	Total SCAT %-iles	Grade IX Deptls %-ages
Rural	4.81	4.97	49.2	47.7
Small Urban	5.42	5.37	56.5	49.5
Large Urban	5,02	4.97	52.5	49.6
Total Sample	5.05	5.09	51.2	48.7

COURSE SELECTION &
STUDENT PROGRAMS


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes
Logical Contingency
Empirical Contingency

CHAPTER THREE

COURSE SELECTION & STUDENT PROGRAMS

This chapter will present results of student-client feedback on the process of course and program selection, and results of computer analyses of student records in analyzing their "programs" or their particular selection of courses.

Information presented on the process of course selection will focus on:

(a) what subject areas were selected and why,
(b) what difficulties were encountered in getting selections,
(c) who influenced selections,
(d) which courses were "dropped" and why,
(e) how, over time, students feel they would have selected differently.

Information obtained as a result of analysis of student records presents "groupings" of students according to similarities in their programs, in that they tended to take similar clusters of courses.

Course Selection

In today's high school, the particular curriculum (through individual courses) that a student experiences depends in large part on *what courses a student selects*. Any evaluation attempt based on student feedback needs to carefully take note of just what "curriculum" the student is referencing when passing opinions.

In addition, the selection process itself is very important in any high school curriculum evaluation as this process determines just what curriculum is experienced. Some information is presented here about the selection process.

Extent of selection. Student perceptions collected in Q1 showed that 60% felt they chose all their courses, 38% reported they chose some courses, and 2% felt all their courses were assigned.

Which Subject Areas were most frequently selected. Table X presents the numbers and percentages of students from Q1 who reported they had selected courses from each of the respective course patterns or subject areas.

TABLE X

Q1 - COURSE SELECTIONS IN EACH SUBJECT AREA

	No.	%
English	2067	92.89
Social Studies	1872	84.13
Mathematics	1845	82.92
Science	1677	75.37
Modern Languages	897	40.40
Physical Education	868	39.01
Business Education	775	34.83
Fine Arts	415	18.65
Home Economics	363	16.31
Technical or Vocational Education	331	14.87
Industrial Arts	297	13.34

Reasons for Selection. For each of the eleven high school subject areas, students were asked on Q1 to indicate their reason for selecting courses from each area. They were asked to select from (a) credit only, (b) personal interest, (c) job preparation, (d) college or university entrance, (e) leisure or recreation. Although full results are presented in Appendix B, the most frequent responses for each area are as follows:

(a) Business Education - job preparation
(b) Technical or Vocational Education - job preparation/personal interest
(c) English - college or university entrance/credit only
(d) Fine Arts - personal interest
(e) Social Studies - college or university entrance/credit only
(f) Home Economics - personal interest
(g) Mathematics - college or university entrance
(h) Industrial Arts - personal interest
(i) Science - college or university entrance
(j) Physical Education - personal interest/leisure or recreation
(k) Modern Languages - college or university entrance/personal interest

Difficulties in Getting Selections. Table XI identifies proportions of the Q1 respondents who were unable to get registered in selected courses by subject area. Problems seem to be highest in what may be considered "option" areas and reasons most often related to either timetable problems or courses not being offered.

TABLE XI

ENROLLMENT DIFFICULTIES & REASONS

(Q1, N=2224)

	Number with difficulty	Percentage reporting various reasons for enrollment difficulties				
		Course not offered	Too many credits	Time-table problems	Marks too low	Other
Physical Education	272	24%	6%	51%	4%	15%
Fine Arts	204	32%	8%	38%	2%	20%
Home Economics	189	28%	4%	35%	1%	32%
Industrial Arts	188	36%	5%	32%	2%	25%
Technical or Vocational Education	175	53%	7%	14%	2%	24%
Business Education	162	20%	7%	40%	5%	27%
Modern Languages	135	17%	3%	29%	17%	34%
Science	91	12%	6%	29%	23%	30%
Mathematics	90	7%	4%	28%	39%	22%
Social Studies	78	9%	2%	49%	16%	23%
English	49	13%	5%	24%	26%	32%

__Who Influences Selections__? Respondents of Q1 were asked to indicate who influenced their course selection the most, with respect to each subject area. In all cases, the largest number of students indicated "other" over parents, teacher, guidance counsellor, or friends. One can only speculate on the reasons for this. With the "other" responses excepted it would appear that parents have the most influence in the selection of Business, Vocational and Modern Languages courses; friends the most influence in Fine Arts, Home Economics, Industrial Arts and Physical Education; teacher and counsellors the most influence in the Academic subject areas. For further detail the reader is referred to Appendix B.

__Dropping Courses After Selection__. Some information was sought regarding the extent of courses being dropped in each subject area and the reasons. Table XII shows the prevalence of dropping courses in each subject area by showing the percentage of those enrolled who reported they had dropped a course in that area. The number of those offering certain reasons are also shown. Subject areas showing the highest proportion of dropouts are Business Education, Science, and Modern Languages, all with dropout rates of greater than 10%. The reason given for dropping in these three areas is principally Too Difficult. This may indicate a need for review of curriculum in these areas.

TABLE XII

PREVALANCE OF STUDENTS DROPPING COURSES AND REASONS

	Proportion of those enrolled	Reasons: Numbers			
		Too diff.	Too easy	Course load too heavy	Suspended
Business Education	13%	40	16	41	7
Science	12%	117	7	59	12
Modern Languages	10%	58	3	31	1
Technical or Vocational Education	7%	7	6	8	4
Mathematics	7%	79	3	36	8
Physical Education	5%	8	6	26	6
Industrial Arts	5%	3	4	3	5
Fine Arts	5%	6	5	7	2
Social Studies	4%	15	10	32	11
Home Economics	3%	2	3	6	-
English	3%	14	8	20	18

Which Subject Areas Should Be Selected?

What advice would those student-clients involved in this study have for educators and/or future students regarding program composition or course selection? The students involved were asked the question "If you could start grade eleven, all over again, which courses would you now register in?" The same question was asked (a) at the end of grade eleven (Q1-1971), (b) Q2-1973, and (c) four years later in 1977(Q3). The results are graphically presented in Figure 10 with the first entry on the graph the percentage of students actually registering in courses from the subject area in their grade 11 year.

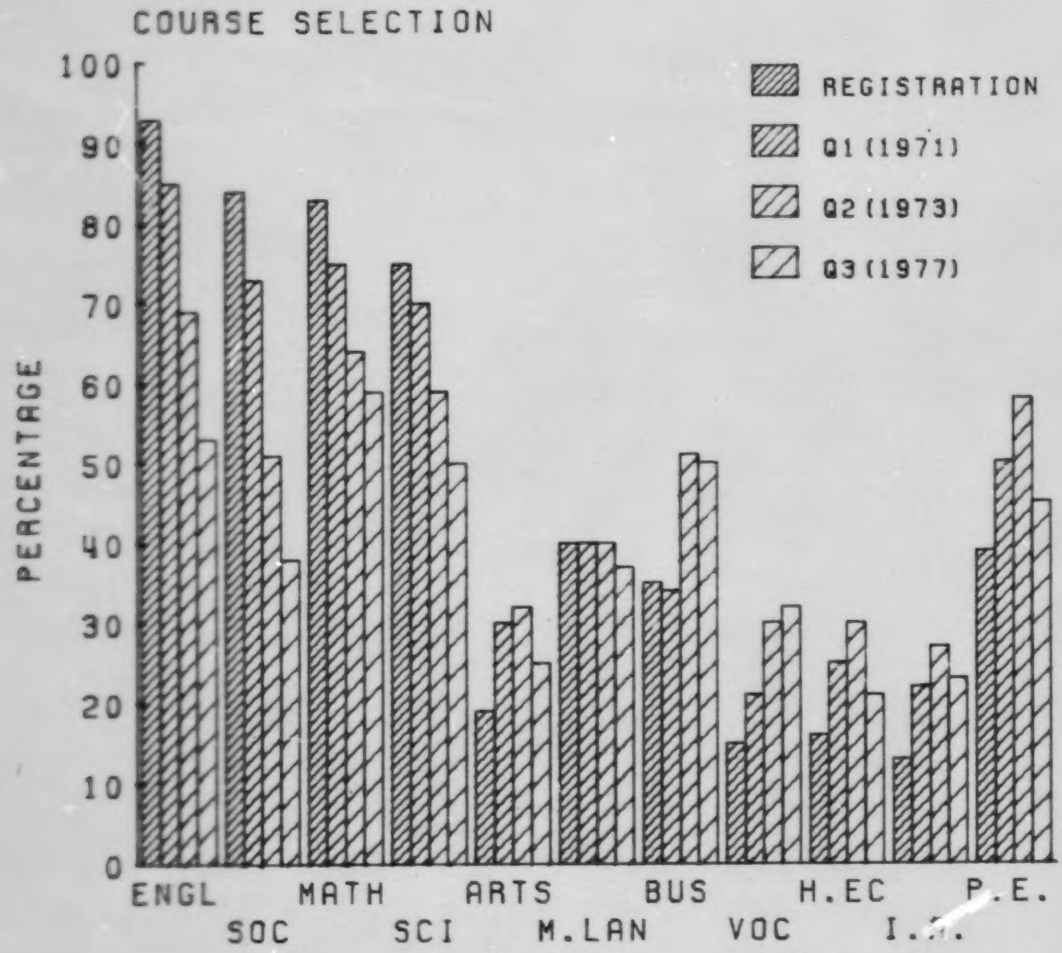


Figure 10

While there was a general reduction in the number of selections marked, clearly this particular group of student-clients seemed to see the "academic" courses as less important as time passed after they left school. In contrast they report an increased recognition of the need to include Business, Vocational, Physical Education and the Practical Arts in their high school programs.

Other studies that have made similar comparisons between students and their parents have shown that the "older" person tended to lean more to the "academic" courses and the younger student more to the "practical arts" courses. Here, however, we have the same group of people showing a shift to the practical arts as they have experience with their post high school environment.

STUDENT PROGRAMS

It has already been shown that high school students selected courses from a wide variety of school offerings. In fact, the particular curriculum experienced varies widely from student to student. In providing evaluative feedback on their high school experiences, each student then could be referring to a significantly different set of courses and hence different "curriculum".

To partially overcome this problem an attempt was made to group students based on similar if not identical programs (or clusters of courses). Traditionally this has been done by referring to (a) matriculation programs, (b) vocational programs, (c) business education programs, and (d) general programs. While this categorization is useful, each category is still quite broad and not discriminating enough.

Cluster Analysis

In an attempt to identify possible "clusters" of courses taken by significantly large numbers of students, two approaches were taken.

Hand Analysis. Over 400 student programs were processed by hand: each program placed on cards and then grouped according to similarity.

Machine Analysis. Large numbers of student programs were analyzed by cluster analysis computer programs, using different algorithms; primarily Ward's[1] method.

By combining the results of these methods, neither of which produced completely exclusive and exhaustive categories, it was possible to identify some definite bases for grouping. Essentially, what became apparent was a rationale for sub-dividing the two large categories of the traditional method (namely, the matriculation and general groups).

---

[1] Ward, J.H. Journal of American Statistics Assn. Vol 58, 1963 pp. 236.

The matriculation group was sub-divided based on the particular cluster of matriculation courses taken, and the general program group was sub-divided based on the selection of a core of courses outside those required by the Department of Education for a high school diploma. The results provided for a total of 15 categories defined as follows:

1. Matric MSL - Matric (5 or more courses) with Eng., S.S., Math., Science, Modern Lang.
2. Matric MS - Matric (5 or more courses) with Eng., S.S., Math, Science.
3. Matric ML - Matric (5 or more courses) with Eng., S.S., Math., Modern Lang.
4. Matric SL - Matric (5 or more courses) with Eng., S.S., Science, Modern Lang.
5. Matric S - Matric (5 or more courses) with Eng., S.S., Science
6. Short Matric - One short of matriculation
7. Matric & Voc. - Matric (4 or more courses) and grade eleven level Vocational
8. Matric & Bus. - Matric (4 or more courses) and 15 credits in Business (10 credits at grade 11 level).
9. Voc. Dipl. - Diploma requirements with grade eleven level vocational
10. Bus. Dipl. - Diploma requirements with 15 credits in Business (10 credits at grade 11).
11. Fine Arts Dipl. - Diploma requirements with 10 credits in Fine Arts.
12. H.Ec. Dipl. - Diploma requirements with 10 credits in Home Economics.
13. I.A. Dipl. - Diploma requirements with 10 credits in Industrial Arts.
14. Gen. Dipl. - Diploma requirements only.
15. Non Dipl. - Programs did not meet Diploma requirements.

In addition, the traditional program definitions were retained so that we ended up with a 15-way and a 4-way categorization system. The 4-way program categorization was defined as follows:

1. Business: same as Bus. Dipl. above.
2. Vocational: same as Voc. Dipl. above.
3. Matriculation: #1 to #8 above combined.
4. General: #11 to #15 above combined.

Student Record Analyses and Identification

After the definition of the student "programs", each record of the 2754 student participants in the study was categorized and labeled. Special computer programming was developed to accomplish this task.

Since Grade X programs in the high school tend to remain quite similar due to Department of Education Diploma requirements, it was felt that the most appropriate year to focus on categorization was the Grade XI year. This was also the year chosen in which to administer the first questionnaire. Since this was a "program" analysis, registrations rather than successful completions were considered.

After each student's Grade XI record was analyzed, placed into one of the 15-way and 4-way categories and so labeled, further analysis was undertaken to show various statistics for each category.

15-Way Categorization. Table XIII shows the numbers and percentages of students whose grade eleven program was identified as meeting the criteria for each of the 15 categories. In addition average ability and achievement scores are presented for the students placed in each category. Average school size associated with each program type are also presented. Finally, the percentage of the students enrolled whose T-SCAT score falls below the mean for the total sample, is shown.

A few observations can be made:

1. All of the diploma programs held students of lower ability and achievement.
2. Matriculation programs which include Modern Languages enroll significantly larger proportions of females, while the Math-Science program has a larger proportion of males.
3. Both the General Diploma and the Non-Diploma programs held larger proportions of males.
4. A few programs such as #5 have numbers really too small to deal with.
5. The Matric-Voc, Matric-Bus and Voc Dipl programs typically are to be found in the larger high schools.

4-Way Categorization. When the 15 categories are grouped into the traditional Business, Vocational, Matriculation, and General categories statistics for each of the four programs appear as in Table XIV.

TABLE XIII

DESCRIPTIVE STATISTICS FOR ENROLLMENTS IN 15-WAY PROGRAMS

Program Type	Percentage Male/ Female	Number and Percent. Registered	Ability T-SCAT Average Stanine	Achievement Grade IX Deptl Averages	Average School Size (Enrollments)	% Enrolled Below Mean T-SCAT	Self Perception
For Total Student Sample			4.6	44	820		3.18
Matric SML	44/56	547/19.9	6.9	55	780	11.7	3.48
Matric MS	60/40	306/11.1	6.0	50	790	25.1	3.35
Matric ML	25/75	64/2.3	6.4	52	590	26.7	3.36
Matric SL	26/74	49/1.8	4.7	45	970	46.9	3.18
Matric S	83/17	6/.2	6.0	50	580	16.7	3.20
Short Matric	46/54	413/15.0	4.9	46	930	41.2	3.17
Matric and Voc	100/0	27/1.0	5.6	51	1570	14.8	3.41
Matric and Bus	26/74	23/.8	5.4	48	1090	34.7	3.19
Voc Dipl	83/17	212/7.7	3.1	37	1130	69.9	2.97
Bus. Dipl	13/87	244/8.9	2.4	36	820	81.9	3.00
Fine Arts Dipl	51/49	39/1.4	3.3	39	620	69.1	2.92
H.Ec. Dipl	13/87	15/.5	1.1	31	900	100.0	2.93
I.A. Dipl	100/0	21/.8	2.8	34	400	71.3	2.74
Gen Dipl	58/42	344/12.5	3.1	37	590	70.7	2.98
Non Dipl	61/39	444/16.1	3.3	37	780	68.9	2.93

TABLE XIV

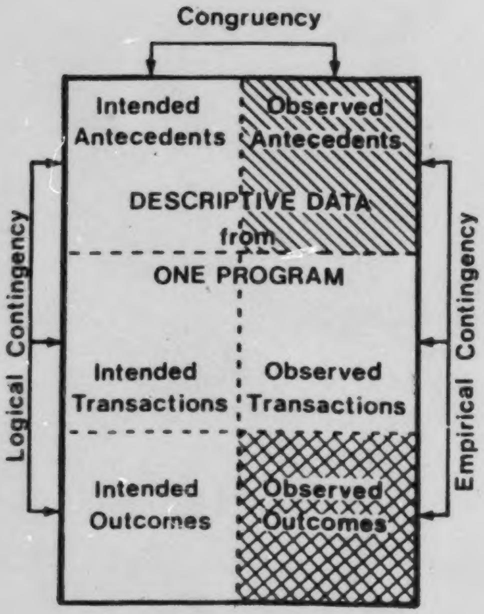
DESCRIPTIVE STATISTICS FOR ENROLLMENTS IN 4-WAY PROGRAMS

Program Type	Percentage Male/ Female	Number and Percent. Registered	Ability T-SCAT Average Stanine	Achievement Grade IX Deptl Averages	Average School Size (Enrollments)	% Enrolled Below Mean T-SCAT	Self Perception
For Total Student Sample			4.6	44	820		3.18
Business	13/87	244/8.9	2.5	36	820	81.9	3.00
Vocational	83/17	212/7.7	3.1	37	1130	69.9	2.97
Matriculation	48/52	1435/52.1	6.0	51	850	25.4	3.34
General	59/41	863/31.3	3.2	37	690	70.1	2.95

A few observations can be made:

1. Business, Vocational and General programs hold students with lower ability and achievement scores. Business holds the lowest with 82% of those enrolled below the mean for Total-SCAT scores.
2. Again, Vocational programs (as expected) are housed in the largest schools.
3. Slightly over half of the grade eleven students in 1971 were following a matriculation program.
4. Almost one-third of the sample were enrolled in general programs.
5. Business and Vocational enrollments followed with less than 10% each.

Career Plans
and
Achievements


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes
Logical Contingency
Empirical Contingency

CHAPTER FOUR

CAREER PLANS AND ACHIEVEMENTS

Information was gathered concerning students' career plans on the first questionnaire (Q1) and subsequent information was gathered on the achievement of these plans through student feedback via Q2 and Q3.

This chapter will deal with career development from a broad perspective. Chapters Five and Six will focus more specifically on educational and occupational achievements of the student sample.

The first part of this chapter deals with career plans: what are they, who influences the forming of career plans, and how are they associated with the various school programs. The second part of the chapter follows through the development of the career plans showing the students' achievement in 1973 and 1977. The achievement of career plans is shown in association with school programs and other related variables.

Plans To Finish High School

Of the students responding to Q1 in 1971 nearly all planned to finish grade twelve. Only about 8% said either "no" or were undecided on the matter. Slightly larger numbers indicated that they felt their parents wanted them to complete grade twelve.

Reasons for Not Finishing. Most of those who felt they may leave before completion indicated that they would do so either "to get a job" or because of "dislike for school". A few others gave "poor marks", "to get married", or "financial problems" as possible reasons. These responses to the same question on Q2 were very similar in 1973. Table XV however, shows a shift for those responding to Q3 in 1977 toward a higher percentage indicating a dislike for school.

TABLE XV

IF YOU PLAN TO LEAVE (OR HAVE LEFT) SCHOOL BEFORE COMPLETING GRADE TWELVE, WHY?

	Q1	Q2	Q3
To get a job	55%	55%	28%
Poor marks	8%	5%	5%
To get married	8%	9%	16%
Financial problems	6%	12%	5%
Dislike for school work	22%	20%	46%

Career Decisions

At what age does or should a young person make a career decision? This question is often asked with regard to the potential specificity of high school programs.

Students were asked the question: "Have you decided on a career?"

In 1971 in their grade eleven year 46% responded "yes". only 14% "no", the remainder were uncertain. Figure 11 shows a breakdown of these responses. A slightly higher proportion of females than males have made a career decision. Those that had made a career decision show lower ability scores, those who responded "no", the highest ability scores.

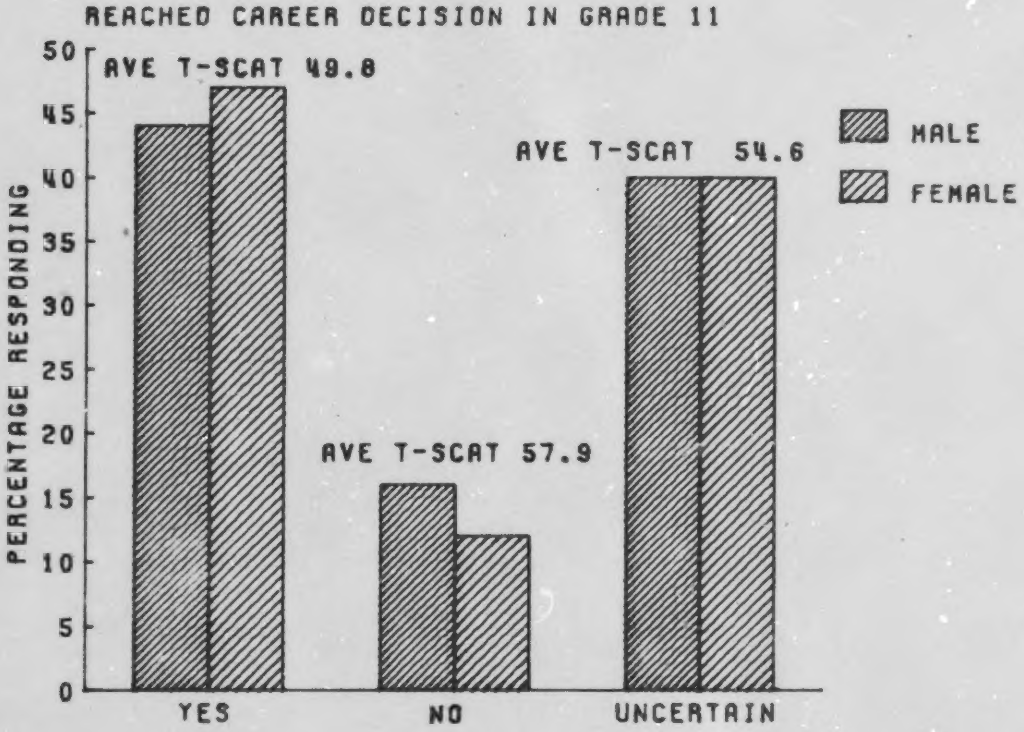


Figure 11

By the completion of high school (1973) 55% of those responding indicated "yes" to the question concerning a career decision, with 11% responding "no".

Career Plans

What did the 1971 grade eleven student plan to do after school? Twenty two percent reported plans to enter work or an apprenticeship immediately on graduation. In fact, 46%

were to actually end up going directly to work, as an analysis of the Q2 (1973) results show (to be discussed later). A breakdown of the Q1 plans by sex and showing average ability follows in Figure 12.

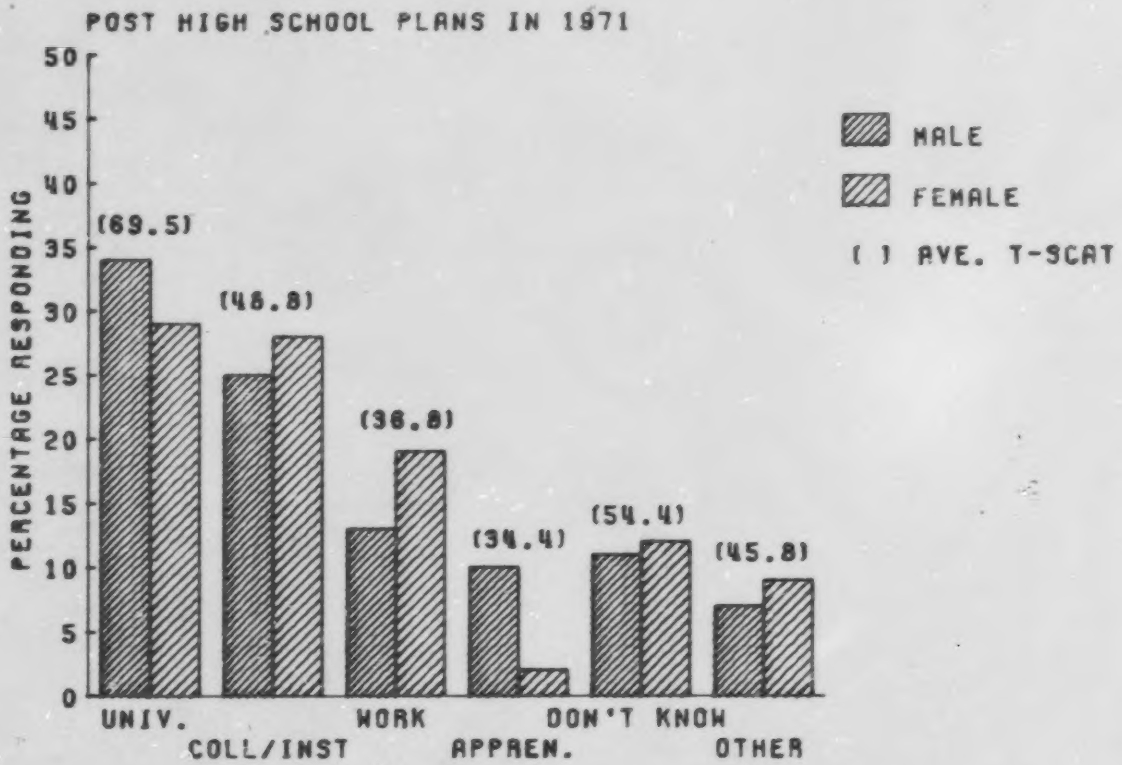


Figure 12

Parents' wishes. Students were asked the question "Where do your parents want you to go after you leave high school?" The results are quite similar but show a somewhat higher percentage for university. Comparing them to the student's own plans we see that students held slightly lower educational goals for themselves than they thought their parents held for them:

	Student	Parent
(a) university	31%	40%
(b) college or institute	26%	24%
(c) work	16%	12%
(d) apprenticeship	6%	4%
(e) don't know	12%	21%
(f) other	8%	-

Who influences? Questions on both Q1 and Q2 sought to identify the major source of influence in making plans for after high school. The results were very similar for the two questionnaires.

	Q1	Q2
(a) parents	36%	35%
(b) relatives	4%	3%
(c) teachers	3%	3%
(d) guidance counsellor	5%	4%
(e) friends	9%	10%
(f) principal	N A	.5%
(g) other	40%	43%

The large number of responses in the "other" indicate a significant inadequacy in the response options presented, or the student felt than no one had a particular influence on their career plans. Nevertheless, of those indicated, parents carried the major influence for most students.

Plans by Program

Cross-tabulations of student plans and their programs give some idea of the compatibility of their career plans with their selected high school program:

(a) of those with university plans - 89% were enrolled in the matric program.
(b) of those with college or institute plans - 17% were enrolled in the general program,
(c) of those planning work or apprenticeships - less than 40% were enrolled in business or vocational programs.

Figure 13 takes those in each program, and shows the percentage of those in each category of post-high school plans.

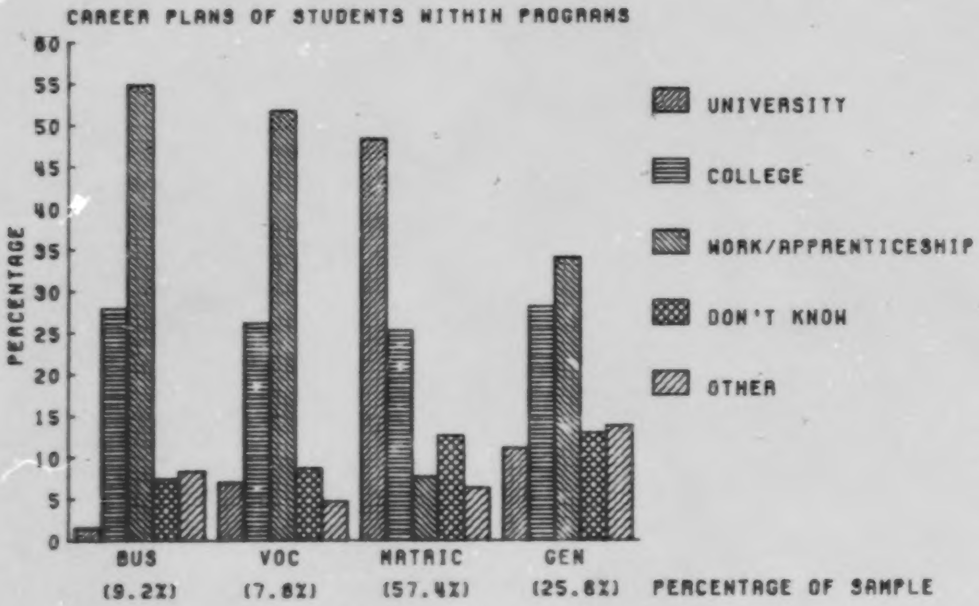


Figure 13

CAREER ACHIEVEMENTS

While career plans fall into the category of antecedent (observed) information about the student-client, it is important to gather information about the achievement of these plans (observed outcomes).

Both the 1973 (Q2) and the 1977 (Q3) questionnaires asked respondents to indicate their current career status. The results along with some comparisons to their plans and school programs follow.

Career Status In 1973 and 1977

1973. Some two years after the first questionnaire was administered in grade 11, responses to Q2 indicated that approximately 46% (3% apprenticeship) had gone directly to work, 34% had gone on to university, college or institute of technology, 6% were still in high school, 6% unemployed, and 7% reported "other". Figure 14 shows this breakdown by sex, indicating a larger proportion of males were found to be employed (employed plus those in apprenticeship), or still in high school than was the case of the females. A larger proportion of the females went to university, college, institutes, or were unemployed than was the case for males.

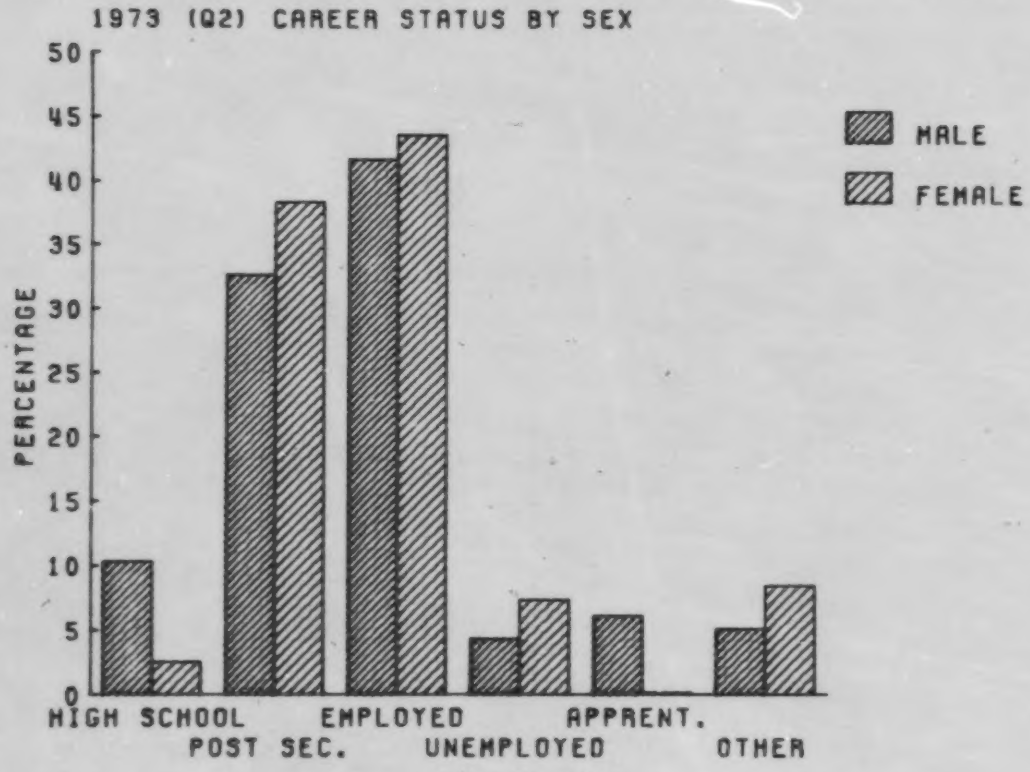


Figure 14

1977. By 1977 the career status of those involved in the study had changed. The responses chosen for the 1977 questionnaire did not parallel the earlier questionnaires but some comparisons can be made. Figure 15 presents the status by 1977. Those engaged in "homemaking" were asked to respond as employed, accounting for about 25% of the females in that category. While in 1971 a slightly larger proportion of females than males were involved in post-secondary programs, the results from 1977 shows that the males stayed longer in post-secondary programs as twice the number of males as females were still active students in 1977.

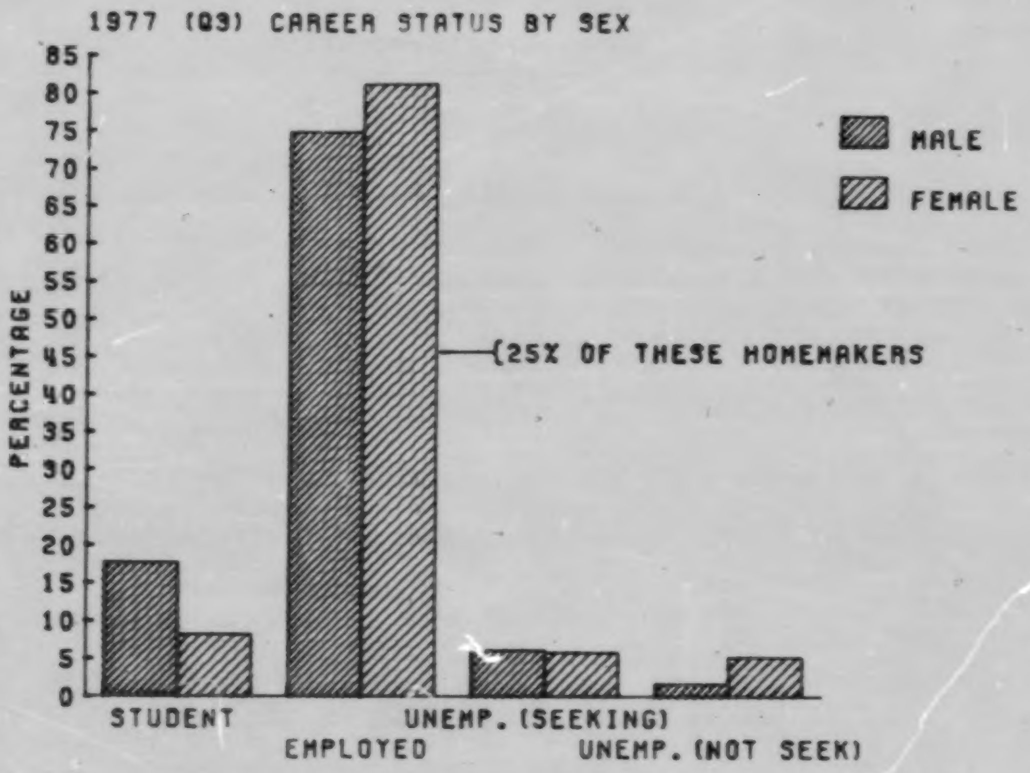


Figure 15

Career Plans And Later Career Status

Career Plans and 1973 Status. While more students ended up going directly to work than planned and fewer students went on to further education than planned, a cross-reference of plans with 1973 status shows notable proportions of students carrying out their plans. Table XVI shows some of the detail, indicating that of those planning on going to university, 58.8% did end up going on to some form of post-secondary program. Of those planning on going directly to work or apprenticeship more than 70% did so, and about half of those uncertain or reporting "other" plans ended up employed by 1973.

TABLE XVI

1971 PLANS BROKEN DOWN BY 1973 CAREER STATUS

(Showing Percentages In Each Category)

	1973 Career Status					
1971 Plans	High School	Univer Coll Instit	Employed	Unemployed	Apprenticeship	Other
University	6.3	58.8	27.1	3.4	0.4	4.0
College	6.0	33.2	42.3	7.4	3.0	8.0
Work	4.5	4.5	68.9	10.2	2.3	9.6
Apprenticeship	4.5	9.1	57.6	4.5	19.7	4.5
Don't Know	8.1	28.9	48.3	7.4	2.7	4.7
Other	5.9	17.8	52.5	4.0	4.0	15.8

Career Plans and 1977 Status. A level of articulation of occupational plans, with the occupational status in 1977, is apparent in the breakdown presented in Tables XVII and XVIII.

TABLE XVII

1971 CAREER PLANS IN RELATION TO 1977 CAREER STATUS

		Percentage			
1971 Plans		Unem. Seeking	Unem. Not Seeking	Student	Employed
University	217	6.9	2.8	22.6	67.7
College or Institute	166	5.4	3.0	5.4	86.1
Work	74	2.7	6.8	4.1	86.5
Apprenticeship	18	0.0	0.0	0.0	100.0
Don't Know	53	1.9	1.9	11.3	84.9
Other	45	4.4	8.9	2.2	84.4

TABLE XVIII

1977 CAREER STATUS IN RELATION TO CAREER PLANS

	Number	University	Coll. Instit.	Work	Apprenticeship	Don't Know	Other
Unemployed Seeking	29	51.7	31.0	6.9	-	3.4	6.9
Unemployed Not Seeking	21	28.6	23.8	23.8	-	4.8	19.0
Student	68	72.1	13.2	4.4	-	8.8	1.5
Employed	455	32.3	31.4	14.1	4.0	9.9	8.4

Generally, of those who planned to go directly to work, notably larger proportions were employed by 1977, and of those who planned to go to university, notably larger proportions were still students in 1977.

Of those unemployed and seeking work in 1977, notably large proportions had planned either university or college educations.

Career Status By High School Program

1973. The Business Education program showed the highest articulation with 72 percent of those enrolled employed by 1973. The Vocational Education program was next with 54% enrolled reporting employment by 1973. Less than half of those enrolled in a Matriculation program in 1971 ended up going on to further education programs. Figure 16 presents summary statistics.

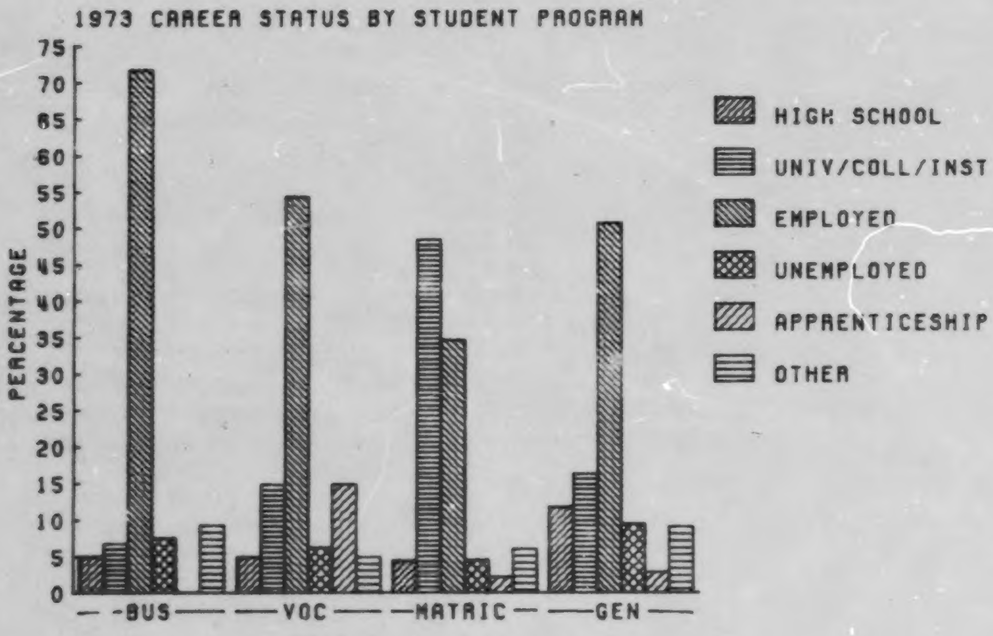


Figure 16

1977 Career Status in Relation To High School Program. Of those students enrolled in either Business or Vocational programs in 1971, none were unemployed and seeking jobs in the questionnaire of 1977 (Q3). However, Figure 17 shows 5.6% of those who were enrolled in matriculation programs to be unemployed and seeking jobs in 1977. More noticeably, 10.2% of those from the general program were unemployed and seeking jobs.

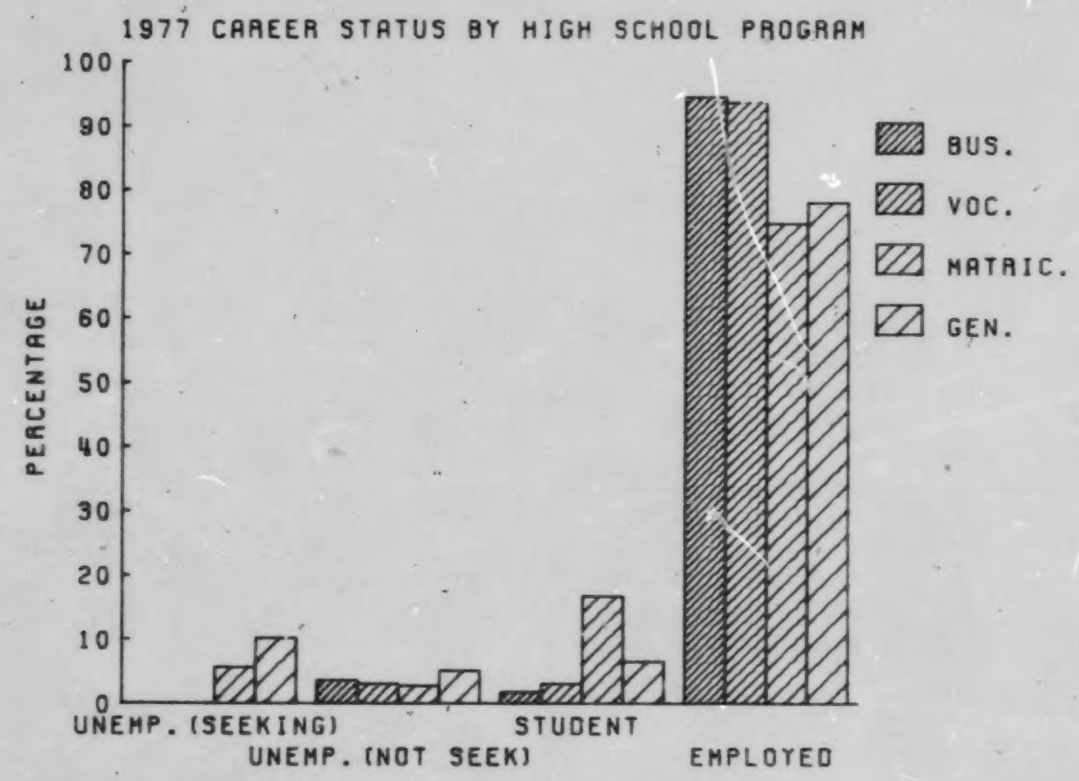


Figure 17

Career Status By School Region

1973. Slightly larger proportions of the students from the large urban centers reported going on to further education programs than did those from the small urban or rural centers. Table XIX also shows that a somewhat larger proportion of small urban students were employed by 1973 than was the case for the rural or large urban centers.

TABLE XIX

1973 CAREER STATUS BY SCHOOL REGION

	High School	Univ. Coll. Institute	Employed	Unemployed	Apprenticeship	Other
Rural	5.3	34.1	41.8	6.8	2.8	9.3
Small Urban	6.5	30.9	48.8	3.3	4.1	6.5
Large Urban	6.8	38.8	42.1	5.4	2.6	4.2

1977 Career Status By School Region. A smaller proportion of students from small urban centers were unemployed in 1977, rural centers were next with 4.7% unemployed and 7.3% of the students from large urban centers were unemployed. The urban centers also show a larger proportion of their high school graduates still involved as students. Table XX presents the breakdown.

TABLE XX

1977 CAREER STATUS BY REGION

	Unemployed Seek. Emp.	Unemployed Not Seek. Emp.	Student	Employed
Rural	4.7	3.7	8.4	83.2
Small Urban	2.0	3.9	11.8	82.4
Large Urban	7.3	3.1	17.0	72.7

Career Status By School Type

In comparing 1973 occupational status with school type, the only notable difference shown in Table XXI is the lower proportion of students employed from "academic only" schools, with correspondingly higher "unemployed" and "other".

TABLE XXI

1973 CAREER STATUS BY SCHOOL TYPE: PERCENTAGES

	High School	Univer. Coll. or Institute	Employed	Unemployed	Apprenticeship	Other
Academic Only	4.4	36.9	35.5	7.9	3.4	11.8
Acad. and Business	4.9	36.0	43.8	5.8	2.4	7.1
Acad., Bus., and Voc.	7.2	35.4	43.9	5.3	2.9	5.3

1977 Career Status By School Type. By 1977, the student-client who had graduated from an "academic only" high school still showed a slightly higher proportion in the unemployed category. Table XXII shows the overall distribution. The Academic and Business, along with the Academic, Business and Vocational high schools show increasingly higher proportions of their graduates still involved as students. This finding is probably more a factor of these schools being located more in urban centres.

TABLE XXII

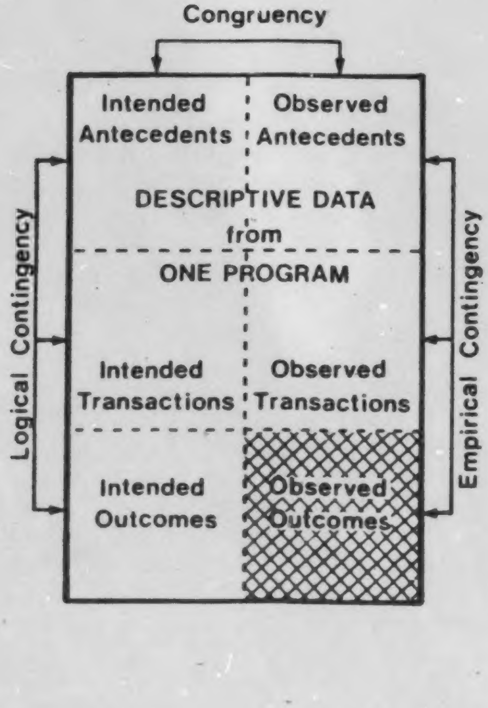
1977 CAREER STATUS BY SCHOOL TYPE

(Showing Percentages)

	Student	Employed	Unemployed Seeking Work	Unemployed Not Seeking
Academic Only	9.8	84.1	6.1	0.0
Acad. and Business	11.4	79.7	5.4	3.5
Acad., Bus., Voc.	13.9	76.2	5.7	4.2

EDUCATIONAL

ACHIEVEMENTS


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
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Empirical Contingency
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes

CHAPTER FIVE

EDUCATIONAL ACHIEVEMENTS

Chapter Four reported on general career plans and achievements: this chapter will deal more specifically with educational achievements. Occupational achievements will be dealt with in Chapter Six.

The following report on the educational achievements of the sample of student-clients selected in 1971 will consider:

(a) high school achievements,
(b) post-high school achievements,
(c) a breakdown of achievements by various student characteristics,
(d) a breakdown of achievement according to the students' programs,
(e) a breakdown of achievement by various school attributes.

High School Achievements

By 1973 (Q2) over 80% reported having completed grade 12, of those who had not completed, the majority indicated an intention to do so.

In fact, an analysis of Department of Education records showed notably fewer than 80% had completed grade 12, when defining grade 12 completion as achieving a high school diploma. Figure 18 gives a breakdown of educational achievement into five categories. This analysis shows that 44% did not receive a high school diploma and only 30% achieved university matriculation standing. These figures show percentages of those entering grade eleven, not of those entering high school. The percentage of those students not achieving a diploma would be higher if the sample had been selected from those entering grade ten.

Post High School Achievements

Although 57% of the students had indicated plans to continue their education after grade 12, by 1973 only 44% were still involved in formal education, including apprenticeships, as indicated by the responses in Table XXIII.

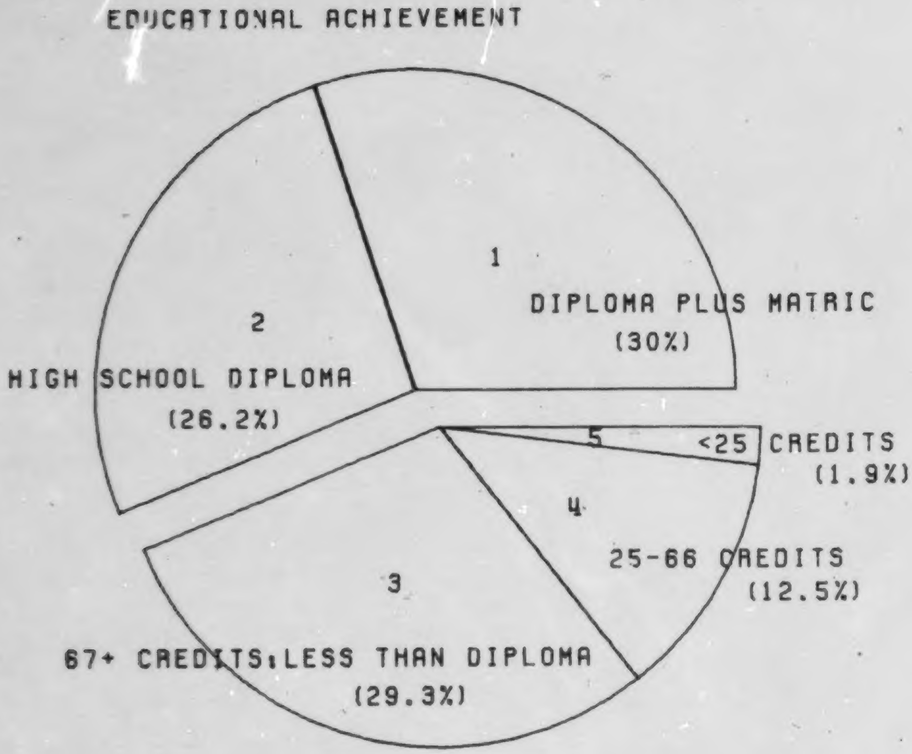


Figure 18

TABLE XXIII

WHAT IS YOUR CURRENT STATUS (Q2)

	Number	Percentage
High school student	94	6%
University, college, or institute of technology student	535	35%
Employed	666	43%
Unemployed	92	6%
Apprenticeship	49	3%
Other	114	7%

The results obtained in 1977 however indicate that close to 66% (Figure 19) had been involved in some educational programs including apprenticeship since leaving high school. This increased figure is probably due to two factors: (a) some return to education from work, and (b) a higher proportion of those going on to higher education being represented in the respondents of Q3. It was shown earlier that the Q3 respondents held a slightly higher average on educational achievements.

Years Of Post High School Education. A related question on the 1977 (Q3) questionnaire sought the number of years beyond high school. The results are displayed in Figure 20.

Post High School Achievement By Program. How do school programs articulate with post high school endeavors? A breakdown of the 1973 status (Q2) for each of the 4-way programs reveals:

(a) business programs: 72% employed, 7% in college;
(b) vocational programs: 54% employed, 15% in technical institutes, 15% in apprenticeships;
(c) matriculation program: 48% in university or college;
(d) general program: 6% in university or college.

Since a number of students were still in school in 1973 and most had just left school, the results from the 1977 survey would be more indicative as shown in Figure 21.

This illustration shows that in the Vocational program 26% have gone on to apprenticeships even though several of the vocational programs offer no such opportunity. A further 29% have gone on to college or technical institute. It appears the Vocational program shows a higher level of articulation with institutes and apprenticeships programs than does the Matriculation program with the universities.

Other observations from the illustration may include:

1. For the majority of those in the Business program, high school is the last formal education experience.
2. College programs seem to draw equal proportions (not numbers) from the Business, Matriculation and General programs.

TYPE OF EDUCATIONAL PROGRAM SINCE HIGH SCHOOL

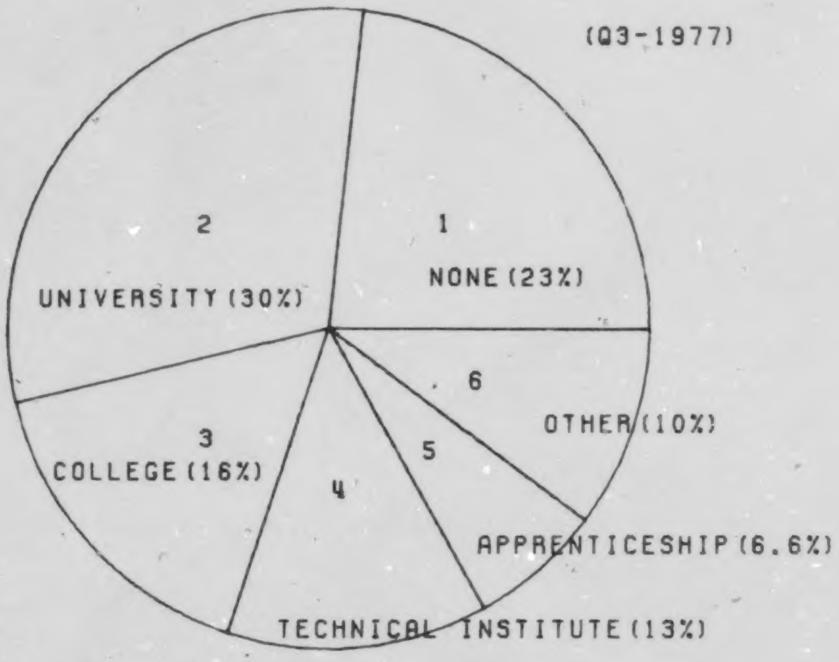


Figure 19

YEARS OF EDUCATION SINCE LEAVING HIGH SCHOOL

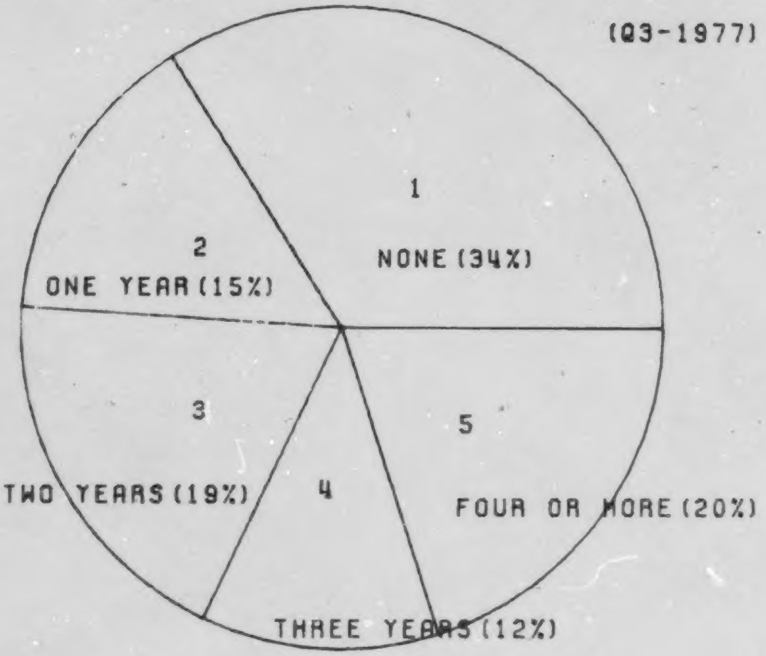


Figure 20

EDUCATIONAL PROGRAMS SINCE LEAVING HIGH SCHOOL (1977)

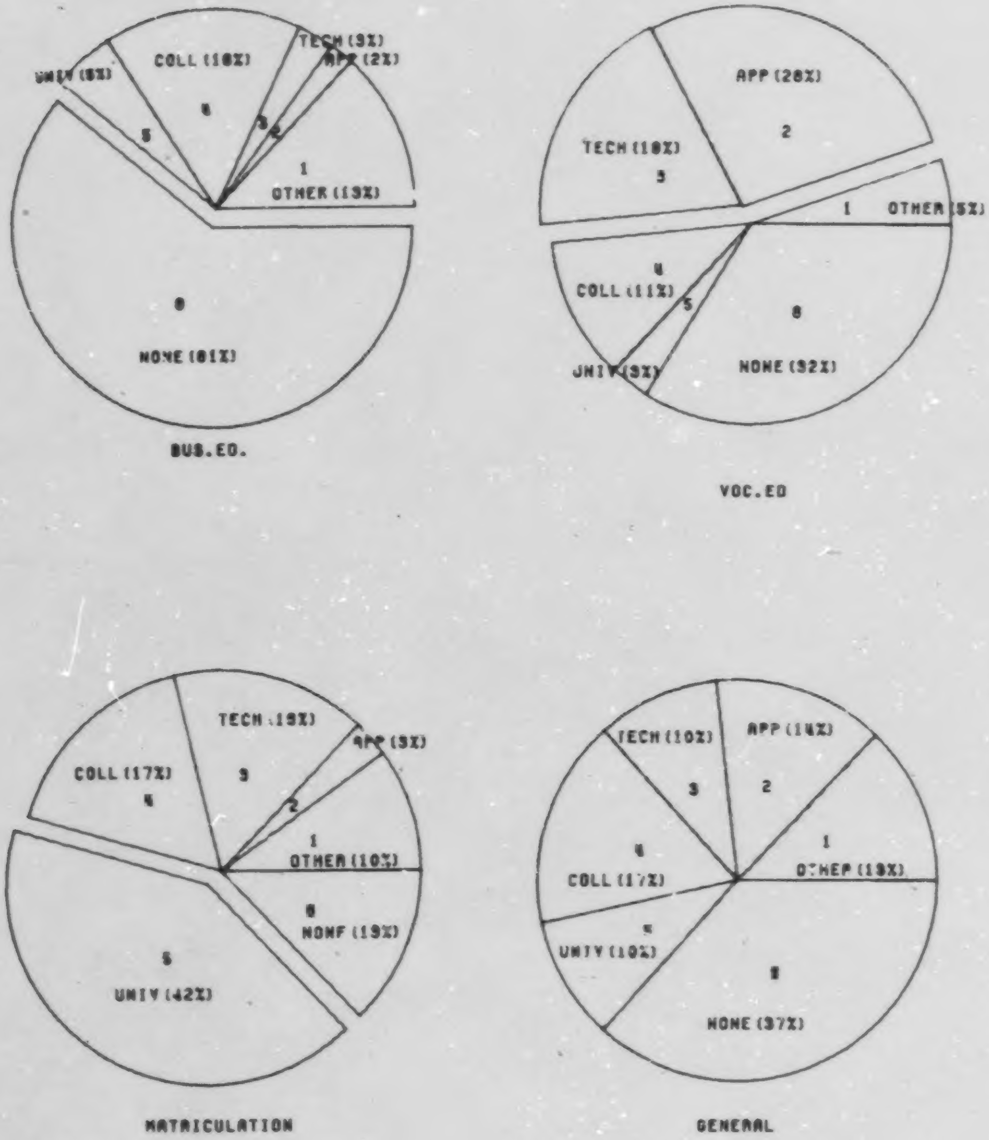


Figure 21

EDUCATIONAL ACHIEVEMENTS BY STUDENT CHARACTERISTICS

As noted earlier, five category levels of achievement in high school were identified focusing on various levels of completion.

1. Matriculation: Achieved university entrance by successfully completing English 30 and four additional courses with an average of 60% or better.
2. H.S. Diploma: Met the normal requirements of an Alberta High School Diploma.
3. 67+ Credits: (less than Dipl) Achieved the entry level into several post-secondary level technical and business programs.
4. 25-66 Credits: Achieved minimal grade ten level.
5. Less than 25 Credits: Achieved less than grade ten level (these students were selected after they had entered their second year of high school.

Completion By Sex

Significantly larger percentages of females achieved the level of a high school diploma or better than did males. This was accomplished even though for this sample, females held a slightly lower level of ability as measured by the T-SCAT tests. Figure 22 shows that 63% percent of the females achieved this level, while only 50% of the males did so. These results are associated with achievement levels from various student programs as differences in sex exist for those enrolled in different programs. For example, more females are enrolled in matriculation programs involving languages (these also have a higher achievement level) while lower achievement levels exist in the strictly Math-Science program with larger proportions of males.

Completion By Age

While age at any given grade level is highly related to the student's ability and past performance levels, Table XXIV summarizes the completion levels of our sample by age at Grade XI. Although the average of all students in the sample completing a high school diploma or better was only 56%, this table shows that 61% of the students at the modal age did so.

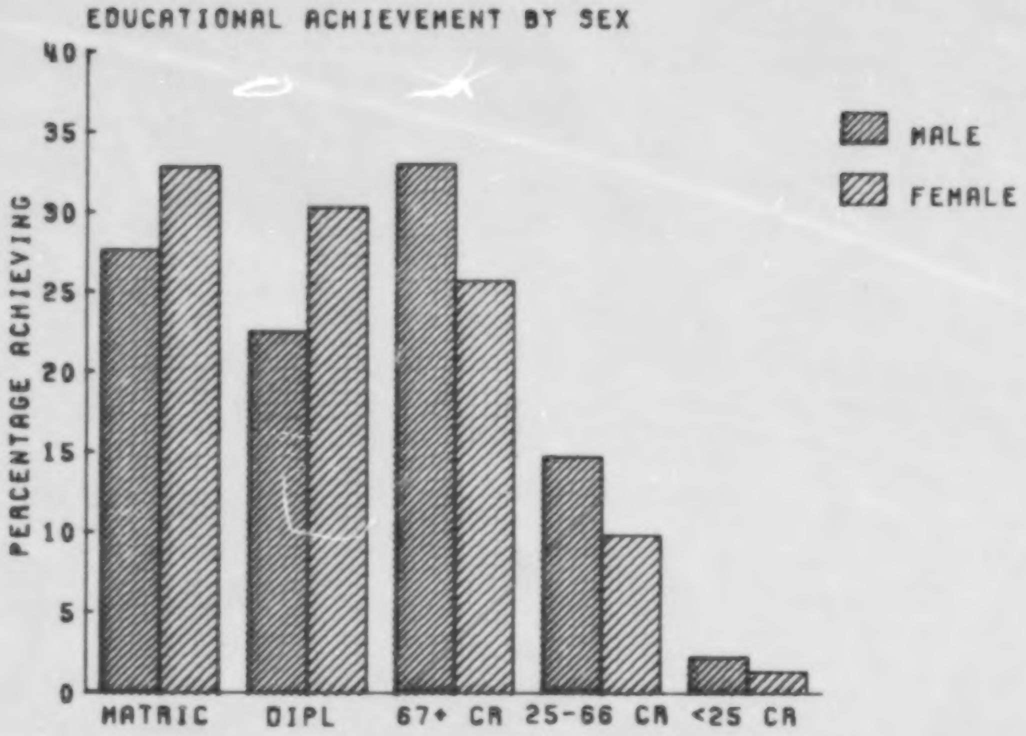


Figure 22

TABLE XXIV

EDUCATIONAL ACHIEVEMENT BY AGE

Age of Grade XI Student in 1971	Number	T-SCAT Mean	Percentage Achieving Matriculation	H.S. Diploma	Non-Dipl 67+ Credits	25-66 Credits	Less than 25 Credits
20 years	14	39.5	7.1	21.4	28.6	28.6	14.3
19 years	93	37.5	2.2	14.0	39.8	40.9	3.2
18 years	464	44.4	9.5	28.0	37.9	21.8	2.8
17 years	1984	5[illegible].1	33.5	27.4	27.9	9.7	1.6
16 years	192	67.7	59.4	17.2	17.7	4.7	1.0
15 years	4	78.5	50.3	-	50.0	-	-
14 years	1	42.0	-	-	100.0	-	-
Total Sample			30.0	26.2	29.3	12.5	1.9

Completion by Ability

Although one would expect a higher percentage of the higher ability levels to achieve higher levels of completion, Table XXV shows that significant numbers even at the lower levels do achieve a high school diploma or better. Of the students who entered high school with grade nine T-SCAT scores in the first decile[1], 35% achieved a high school diploma or better and 6% achieved matriculation. We also see that 26% of the students at the ninth decile were still not achieving a high school diploma.

TABLE XXV

EDUCATIONAL ACHIEVEMENT BY ABILITY

(T-SCAT)

		Percentage Achieving				
				Non-Dipl.		
Deciles	Number	Matric- ulation	H.S. Diploma	67+ Credits	25-66 Credits	Less than 25 Credits
First	277	6.1	28.9	38.6	23.1	3.2
Second	232	4.3	30.2	41.4	21.6	2.6
Third	282	7.1	30.5	38.7	19.1	4.6
Fourth	293	13.3	35.8	33.1	16.0	1.7
Fifth	234	20.9	33.8	30.8	13.2	1.3
Sixth	282	22.3	34.4	30.1	11.0	2.1
Seventh	316	36.7	25.0	27.2	8.9	2.2
Eight	283	47.3	23.3	22.6	6.0	.7
Ninth	276	60.1	13.8	18.8	6.5	.7
Tenth	279	76.3	7.9	14.0	1.8	-

---

[1] Decile is one-tenth of the sample. The first decile refers to the lowest tenth in terms of ability as measured by SCAT Total.

EDUCATIONAL ACHIEVEMENTS BY PROGRAM

Completion rates for students were checked based on the type of school program followed. Tabulations were completed for the 15-way program categorization and for the traditional 4-way categorization.

15-Way Programs

A graphic display of the proportion of students completing at least a high school diploma for each of the 15 programs is shown in Figure 23. A full profile of completion statistics is presented in Table XXVI for the 15 categories. In analyzing the results it is noted that students who attempted the "broadest" matriculation program (more females) seemed to do better although their ability scores were also highest.

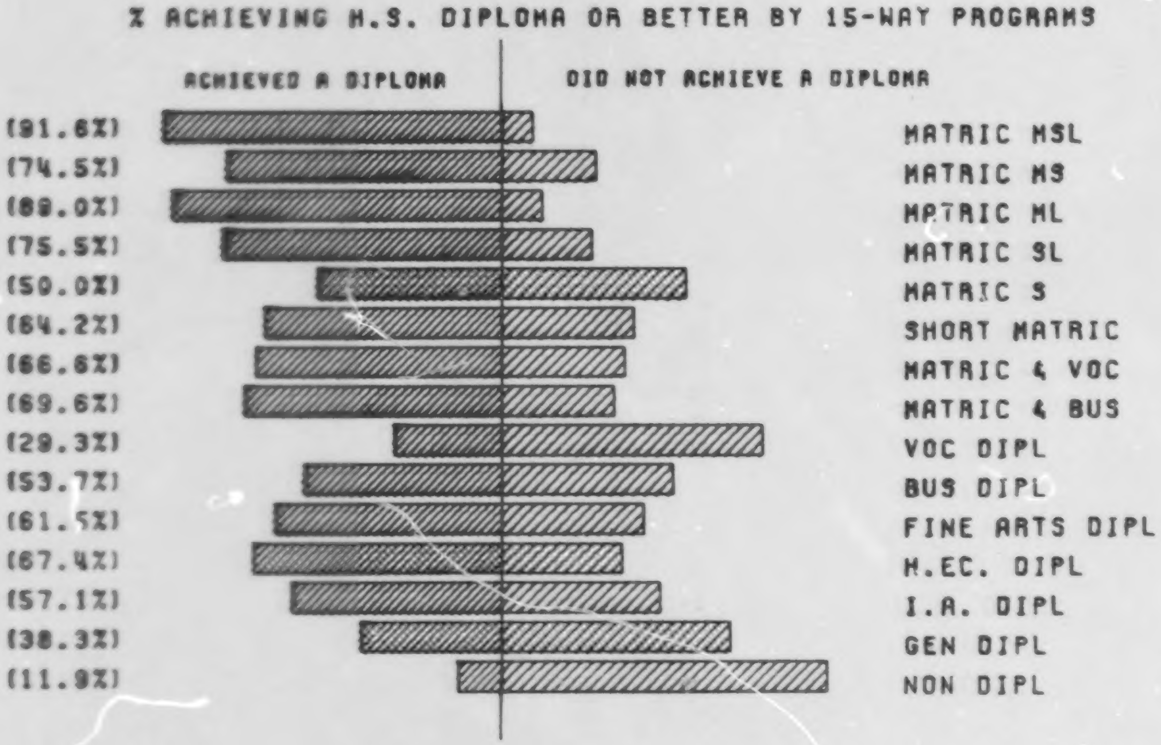


Figure 23

Goals. While ability seems clearly associated with the degree of high school achievement, student plans are also closely associated. For example, students who have low ability ratings yet report plans to go on to university show higher percentage achieving matriculation than those with

TABLE XXVI

PERCENTAGE OF STUDENTS ACHIEVING VARIOUS LEVELS OF SCHOOL COMPLETION BY 15-WAY PROGRAM

	Percent Achieving Diploma or Better	T-SCAT Ability Scores (Avg.)	Percentage Achieving					
			Matric-ulation	H.S. Diploma	Non-Dipl 67+ Credits	25-66 Credits	Less Than 25 Credits	Average of all H.S. Subjects
Total Sample			30.0	26.2	29.3	12.5	1.5	58.1
Matric MSL	91.6	6.9	79.9	11.7	8.4	-	-	70.1
Matric MS	74.5	6.0	48.4	26.1	25.2	-	-	64.9
Matric ML	89.0	6.4	60.9	28.1	10.9	-	-	68.9
Matric SL	75.5	4.7	49.0	26.5	24.5	-	-	62.3
Matric S	50.0	6.0	16.7	33.3	50.0	-	-	58.6
Short Matric	64.2	4.9	29.3	34.9	30.8	5.1	-	60.8
Matric & Voc	66.6	5.6	44.4	22.2	33.3	-	-	61.7
Matric & Bus	69.6	5.4	34.8	34.8	30.4	-	-	64.9
Voc Dipl	29.3	3.1	2.4	26.9	53.8	16.5	.5	59.0
Bus Dipl	53.7	2.4	.8	52.9	41.0	5.3	-	63.0
Fine Arts Dipl	61.5	3.3	-	61.5	33.3	5.1	-	60.1
H. Ec. Dipl	66.7	1.1	-	66.7	26.7	6.7	-	62.2
I. A. Dipl	57.1	2.8	-	57.1	38.1	4.8	-	59.4
Gen Dipl	38.3	3.1	4.9	33.4	47.4	14.2	-	58.1
Non-Dipl	11.9	3.3	2.9	9.0	26.4	50.0	11.7	54.8

higher ability who have not planned on university. A more detailed discussion along this line follows in the next section.

In comparing the non-matriculation routes we note that the Business Education route and the Home Economics route, although serving students with the *lowest* ability ratings, have the highest percentage of students reaching the level of a high school diploma or better.

"Core" programs. In general, all those students who followed a program with some specific "*core*" or a "*depth*" component did significantly better than those who did not. Especially noticeable are the results of the Fine Arts, Home Economics, and Industrial Arts Diploma programs, when compared with the General Diploma.

4-Way Programs

The four-way program categorization is of course just a consolidation of the previous findings. Showing the results this way demonstrates how the achievements of students with "core" general programs get lost in the statistics although some useful comparisons may be made. Table XVII displays the results.

Percentages achieving a high school diploma or better are shown in Figure 24.

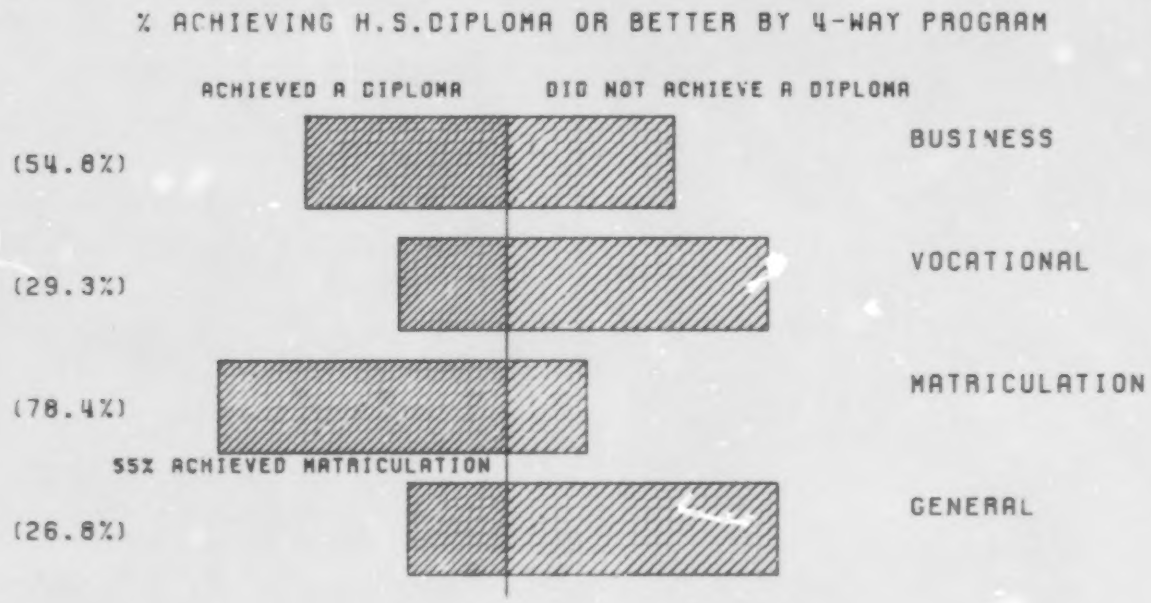


Figure 24

TABLE XXVII

PERCENTAGE OF STUDENTS ACHIEVING VARIOUS LEVELS OF SCHOOL COMPLETION BY 4-WAY PROGRAM

	T-SCAT Ability Scores (Avg.)	Percentage Achieving Matriculation	H.S. Diploma	Non-Dipl. 67+ Credits	25-66 Credits	Less Than 25 Credits	Average of all H.S. Subjects
Total Sample	51.2	30.0	26.2	29.3	12.5	1.9	58.1
Business	29.1	1.9	52.9	40.9	5.3	-	63.0
Vocational	36.1	2.4	26.9	53.7	16.5	-	59.0
Matriculation	65.8	55.1	23.3	20.1	1.5	-	65.7
General	36.7	3.5	23.3	35.3	31.8	6.0	57.0

High School Achievement - Program & Plans

The level of achievement reached by students in each of the programs varies notably depending upon the reported post high school plans.

Figure 25 displays graphically the percentage of students achieving a High School Diploma or better for students reporting various "after school" plans. The results are presented separately for each of the Business, Vocational, and General Programs.

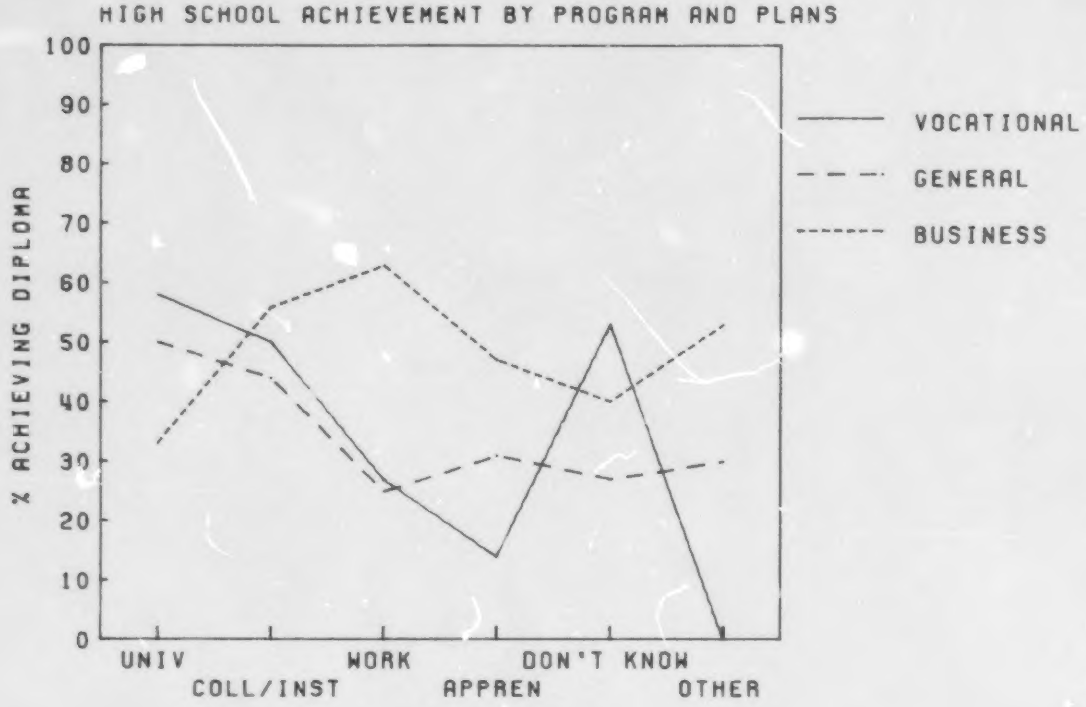


Figure 25

The following points are apparent:

1. Those in the General program, with university or college plans show a higher proportion achieving a diploma.
2. Those with "work" plans show a significantly higher proportion achieving a diploma than others in the Business program.
3. Lower proportions completing the diploma in the Vocational program when "work" or "apprenticeship" plans are held, could be different than expected. The explanation for this lies in the lower requirements of technical programs and apprenticeships, where these students continue their studies as was shown in the earlier part of

this chapter and also discussed in the following chapter on occupational achievements. Ninety percent of those in the Vocational program achieved the required 67 credits.

For the Matriculation program, two achievement levels are plotted in Figure 26: one for the achievement of a High School diploma, and one for achievement of Matriculation.

Again, marked decreases exist in the achievement levels for those who reported plans for work or apprenticeship.

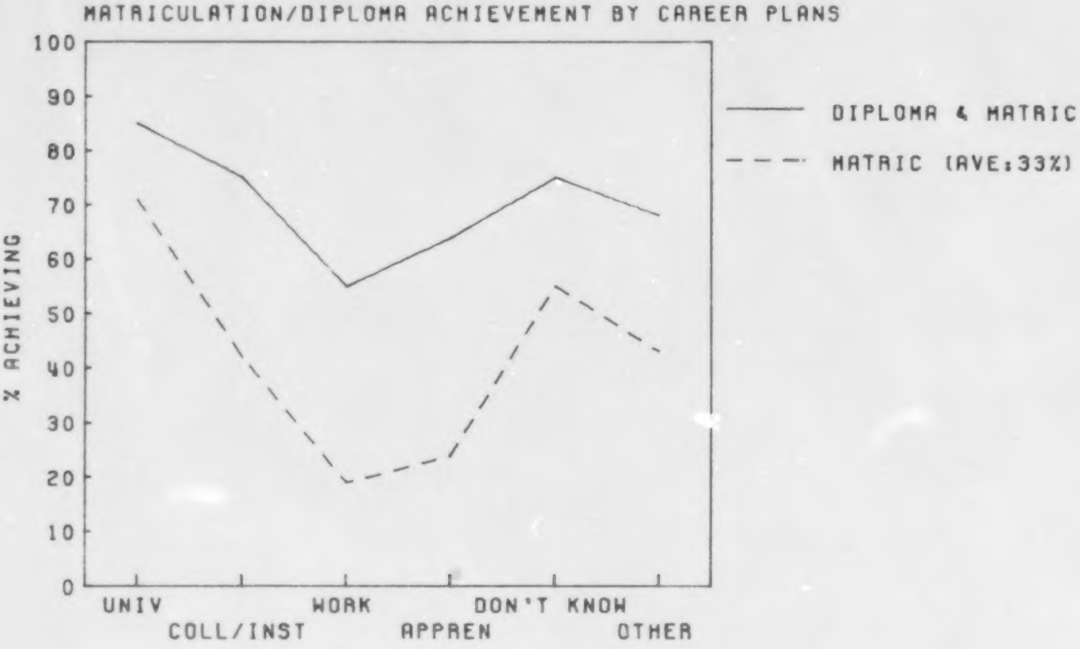


Figure 26

Earlier reference to statistics showing only 33% of those enrolled in the Matriculation program as achieving Matriculation status, takes on a different meaning when we see that over 70% of those with plans for university did in fact achieve matriculation.

High School Achievement - Program & Ability

Ability, as represented by the grade nine Total SCAT scores shows less relationship to the proportion of students achieving a diploma than we may expect.

Figure 27 graphs the proportion of diploma achievers at each decile of ability level for each of the 4-way program categorizations. The proportion of those achieving matriculation shows the highest relationship to the ability levels. Probably the most surprising finding however is the markedly higher proportion of students achieving a diploma in the matriculation program when compared to the other programs, irrespective of the ability level. As reported earlier, personal student goals probably played a part in this result.

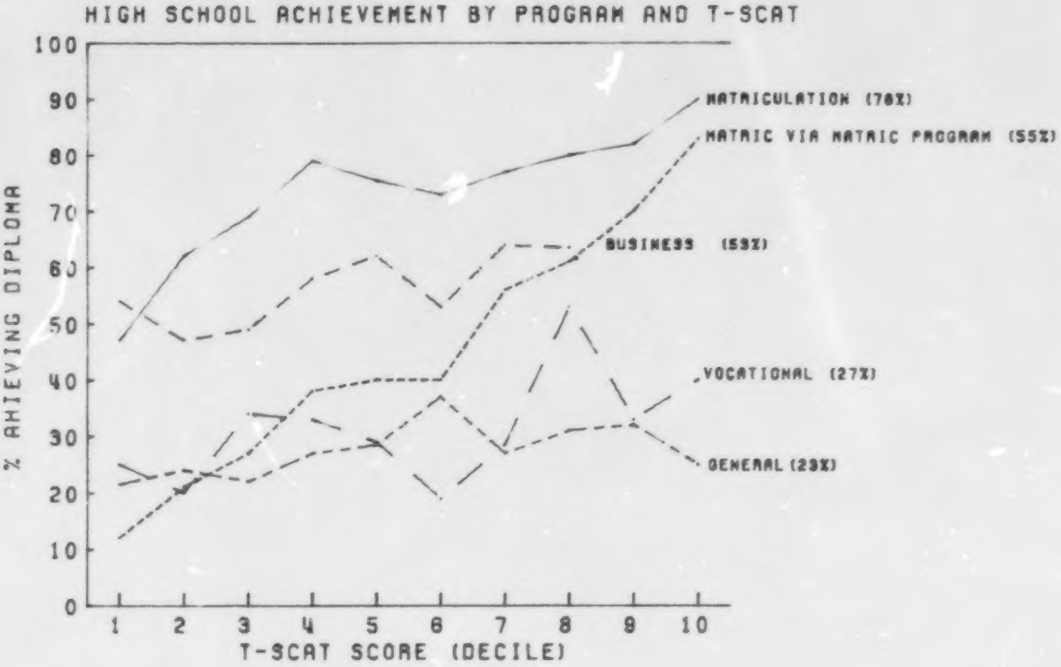


Figure 27

Those in the matriculation program at the lower ability levels were mostly (65%) from families of lower socio-economic status (parents, education) and more often from the rural communities.

EDUCATIONAL ACHIEVEMENT BY SCHOOL CHARACTERISTICS

Tabulations were undertaken to identify possible relationships between completion levels attained and some of the associated school characteristics.

School Size

Of the five school categories based on school enrollment, some small differences are evident in Table XXVIII.

TABLE XXVIII

EDUCATIONAL ACHIEVEMENT BY SCHOOL ENROLLMENT

School Category	Percentage Achieving: Matriculation	H.S. Dipl	Non-Dipl 67+ Credits	25-66 Credits	Less Than 25 Credits	H.S. Diploma or Better
1. Up to 499	28.0	29.6	28.7	12.3	1.4	57.6
2. 500 - 999	30.0	27.2	30.9	10.5	1.4	57.2
3. 1000 - 1499	35.5	26.1	25.5	11.2	1.8	61.6
4. 1500 - 1999	32.6	22.9	29.0	13.4	2.1	55.5
5. 2000 - 2499	29.3	25.0	31.0	12.1	2.6	54.3

Varying results are of course achieved from different categorization schemes. Here, we find that schools in the 1000 - 1499 enrollment range, have the highest percentage of students achieving matriculation and also the highest achieving a high school diploma or better.

The smaller proportion of students achieving a high school diploma in larger schools may be associated with school size. However, other related factors would also influence these proportions, such as programs which articulate with apprenticeships and institute programs with less than a high school diploma.

Credits offered. The smaller school as measured by "credits offered" shows somewhat higher percentages of students meeting graduation requirements. Table XXIX presents the entire results.

TABLE XXIX

EDUCATIONAL ACHIEVEMENT BY SCHOOL CREDITS OFFERED

Number of Credits Offered	Percentage Achieving: Matriculation	H.S. Dipl	Non-Dipl 67+ Credits	25-66 Credits	Less Than 25 Credits	H.S. Diploma or Better
Up to 299	29.6	29.2	26.3	13.4	1.5	58.8
300 - 599	33.4	25.4	29.2	10.4	1.5	58.8
600 - 899	29.1	23.6	29.6	14.9	2.8	52.7
900 - 1199	18.2	37.9	33.3	9.1	1.5	56.1
1200 - 1499	13.0	26.1	39.1	21.7	-	39.1

School Region

Although the small urban schools showed the higher levels of ability ratings, they graduated proportionately fewer students than either rural or large urban schools (Table XXX). Again, the higher proportion of students achieving matriculation in comparison to just a diploma is evident for the large urban school.

TABLE XXX

EDUCATIONAL ACHIEVEMENT BY REGION

	Percentage Achieving:					
Region	Matriculation	H.S. Dipl	Non-Dipl 67+ Credits	25-66 Credits	Less Than 25 Credits	H.S. Diploma or Better
Rural	27.6	30.2	28.7	11.8	1.7	58%
Small Urban	27.5	26.5	36.0	7.9	2.1	54%
Large Urban	33.4	23.0	28.3	13.5	1.9	56%

School Type and Term

Some notable differences in educational achievement become evident when we compare the achievement of students from different school types and different school terms. Although many other variables are involved, there is an indication here for further study. The results are presented in Table XXXI and XXXII.

TABLE XXXI

EDUCATIONAL ACHIEVEMENT BY TYPE OF SCHOOL

	Percentage Achieving:					
	Matric-ulation	H.S. Dipl	Non-Dipl 67+ Credits	25-66 Credits	Less Than 25 Credits	H.S. Diploma or Better
Academic	31.4	24.9	31.1	12.0	.5	56%
Academic & Business	31.9	29.2	26.2	11.1	1.7	61%
Acad. & Bus. & Voc.	29.3	25.4	30.1	13.1	2.2	54%

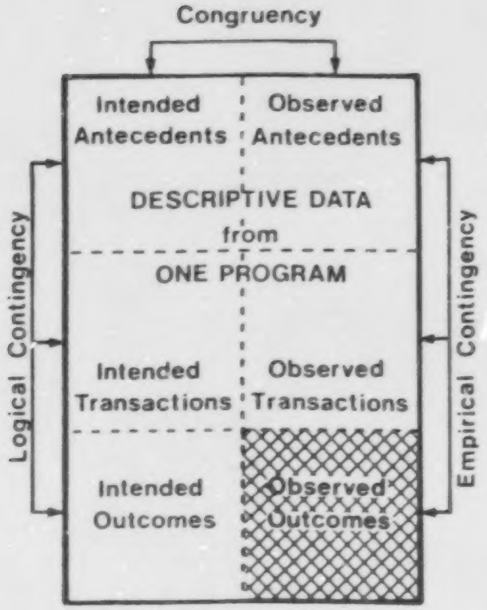
TABLE XXXII

EDUCATIONAL ACHIEVEMENT BY SCHOOL TERM

	Percentage Achieving:					
	Matric-ulation	H.S. Dipl	Non-Dipl 67+ Credits	25-66 Credits	Less Than 25 Credits	H.S. Diploma or Better
10 Month	36.4	22.6	25.5	13.3	2.2	59
Semester	28.3	28.1	30.0	12.0	1.5	56
Tri-mester	20.8	20.8	41.5	11.3	5.7	41

OCCUPATIONAL

ACHIEVEMENTS


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes
Logical Contingency
Empirical Contingency

CHAPTER SIX

OCCUPATIONAL ACHIEVEMENTS

As the second major area of post high school endeavor, occupational development was a prime area for feedback from the students involved in this longitudinal study. Information regarding occupational decisions, the attainment of employment, job status, and job satisfaction was primarily collected via the third questionnaire (Q3) during 1977.

This chapter will deal with the following topics in turn:

(a) occupational status and job classifications,
(b) wage classifications,
(c) extent of mobility.

Cross-referential information will be provided from breakdown and cross-tabulation forms of computer analysis. Reference will be made back to such student variables as sex and ability, program variables and selected school variables.

Occupational Status In 1977

In addition to general categories of employment and unemployment, information was gathered concerning job classification, according to the Pineo-Porter scale of occupational prestige as adapted by Blishen.[1]

Employment Status. Of those responding in 1977, 78.1% were employed, 12.7% were students, 5.8% unemployed seeking jobs, and 3.4% unemployed but not seeking jobs. Some differences are noticeable by sex and are shown in Figure 28.

A larger proportion of the females are employed (including homemaking) and a larger proportion of the males are still students.

Differences in grade nine ability scores are noticeable for the four employment categories. Those respondents who are still students have higher ability scores while those unemployed but not seeking jobs show considerably lower grade nine ability ratings.

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[1] Blishen B.R. and McRoberts H.A. "A Revised Socioeconimic Index For Occupations In Canada" *Canadian Review Of Sociology And Anthropology*. 13:1, 1976.

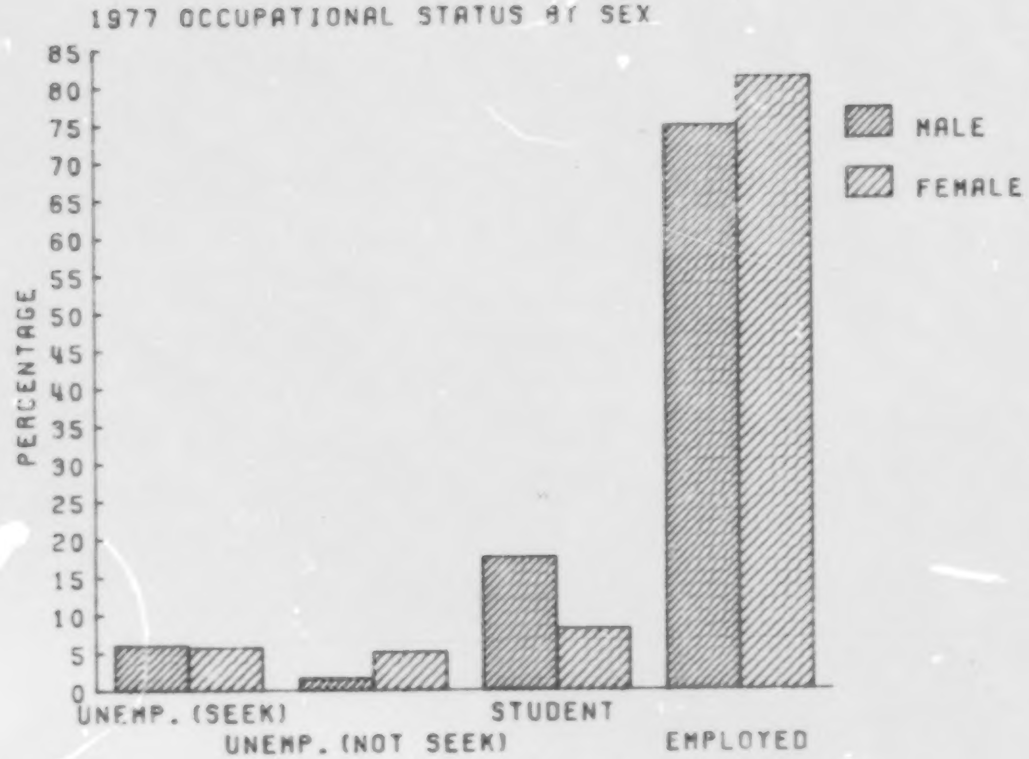


Figure 28

Career Help. Attempts to identify significant areas of influence with regard to career (occupational) choice produced reasonably consistent results through the three questionnaires. Table XXXIII shows the responses to the question: "Which of these people would you ('NOW' in Q2 and Q3) ask for help in deciding on a career?"

TABLE XXXIII

PROPORTION OF STUDENTS IDENTIFYING PERSONS FROM WHOM THEY WOULD SEEK CAREER HELP

	Q1	Q2	Q3
(a) Friends	7%	7%	13%
(b) Teachers	7%	7%	11%
(c) Parents	26%	29%	15%
(d) Guidance Counsellor	47%	30%	43%
(e) Principal	4%	1%	2%
(f) Other	10%	21%	17%
(g) Relatives	NA	3%	NA

In all three questionnaires the significant sources of help in deciding on a career are parents and guidance counsellors. Guidance counsellors rate much higher on this question than they did on the one reported earlier concerning course and program selection.

Job Classification. Respondents to Q3 were asked to write in the type of job in which they were employed. These jobs were then coded according to the Pineo-Porter scale of occupational prestige categories, and tallies made. Table XXXIV shows the results by sex along with average grade 9 T-SCAT scores for those in each category. Similar proportions of males and females are reported in professional and semi-professional categories. However, a notably higher proportion of males (when compared with females) are found in the skilled, semi-skilled, and proprietory jobs; while females more notably are reported in clerical and sales.

TABLE XXXIV

JOB CLASSIFICATION OF 1977 RESPONDENTS

	Male %	Female %	Average Grade Nine T-SCAT Scores
Professional	8.2	8.9	74.6
Semi-Professional	10.0	13.6	70.1
Proprietors, Managers	17.5	7.9	61.1
Clerical & Sales	9.3	35.4	45.0
Skilled	20.8	1.6	44.3
Semi-Skilled	18.6	1.6	52.0
Unskilled	8.6	5.1	-
Farmer	7.1	0.3	48.7
Homemakers	-	25.3	53.4

Grade nine ability ratings (T-SCAT scores) are noticeably higher for the higher ends of the Pineo-Porter classification categories, with the exception of the semi-skilled being higher than skilled.

Occupational Status Related To Plans and Programs

Concern is often expressed over the relationship of high school programs to that which follows. This concern is brought into focus particularly when we consider the relatively higher costs of vocational education.

Respondents to the 1977 questionnaire (Q3) were asked the question: "Is your present vocation related to what you had planned during your high school years?" The results are shown in Figure 29.

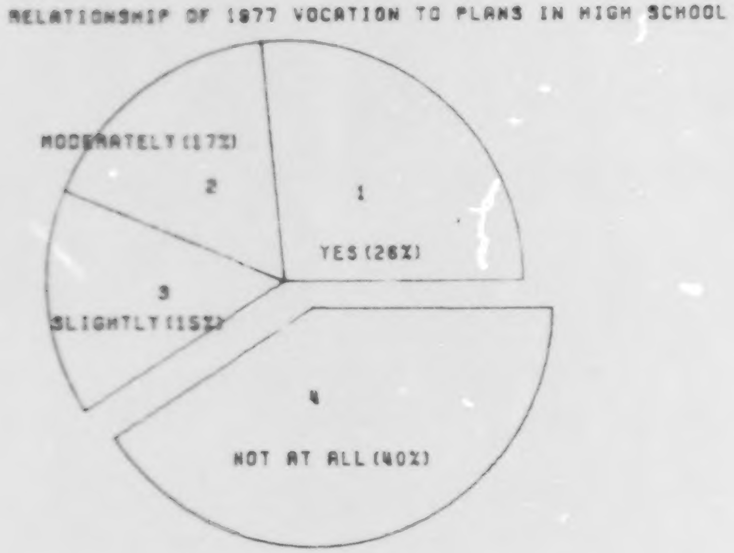


Figure 29

A breakdown of these responses by high school program yields the results shown in Figure 30. Students who had followed a Business Education program report the highest "relatedness" with 52.5% responding yes or moderately, Vocational Education is second with a total of 47.4%, the Matriculation program follows with 45.4% while the General program shows only 38%.

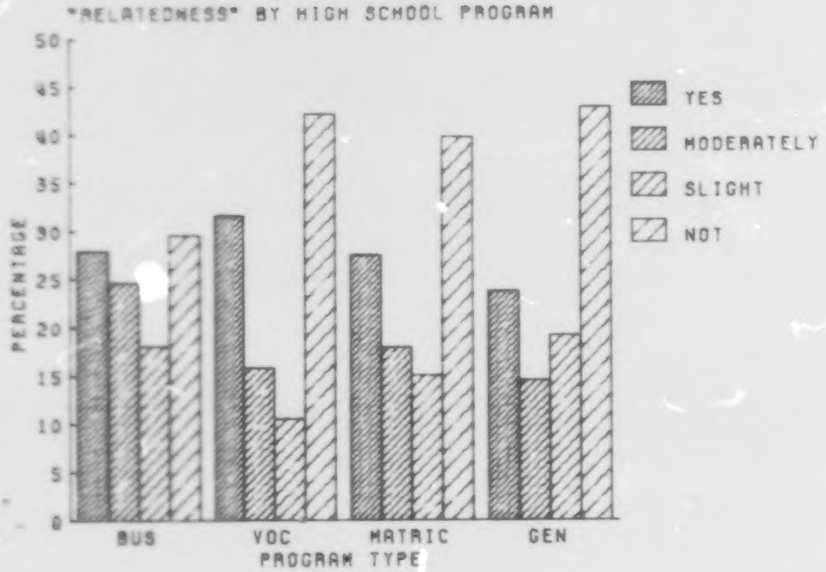


Figure 30

Job Classification in Relation to High School Program. Checks were also made to identify the relationship between the 1971 high school program and the 1977 job classifications reported. Here again evidence is found to support notable relationships between the high school program and post high school employment as shown in Table XXXV.

TABLE XXXV

JOB CLASSIFICATIONS WITHIN SCHOOL PROGRAM TYPE

	Business	Vocational	Matriculation	General
Professional	-	-	12.3	4.0
Semi Professional	3.4	2.8	17.5	2.4
Prop. & Managers	6.8	11.1	13.2	12.8
Clerical Sales	45.8	5.6	21.4	24.0
Skilled	1.7	41.7	7.1	15.2
Semi-skilled	5.1	25.0	7.4	12.8
Unskilled	33.9	11.1	18.4	22.4
Farmer	3.4	2.8	0.3	6.4

Of those enrolled in Vocational Education programs 66.7% were in skilled or semi-skilled jobs. Of those enrolled in Business Education programs, 52.6% were in Clerical, Sales or Managerial positions. Of those enrolled in Matriculation programs, 29.8% were in professional or semi-professional positions, although an additional 16.8% were still studying as students for a possible total of 46.6%.

Wage Classification

Respondents to Q3 (1977) were asked the question "What is your current wage bracket?". Four response categories were provided. Figure 31 presents the percentage of the responses in each category for males and females. Males report noticeably higher wages than do females with 85% of the females earning less than $12,000, while only 54% of the males were earning less than $12,000.

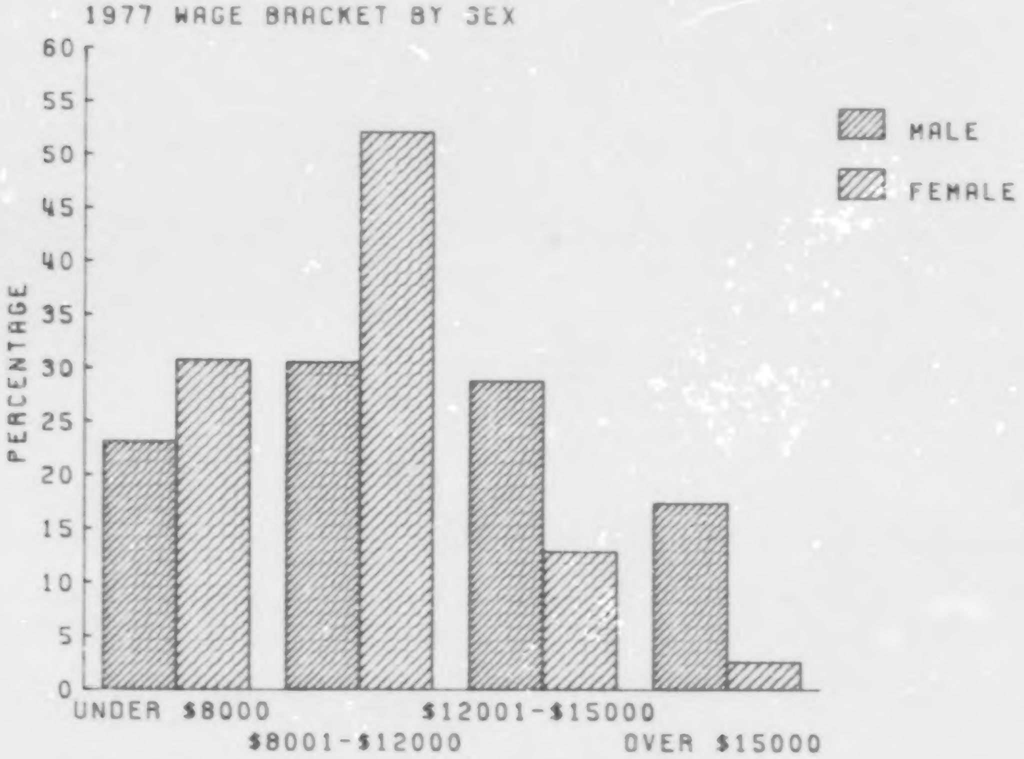


Figure 31

Wages in Relation to School Program. For each of the business, vocational, matriculation, and general programs, the proportion in each wage category is shown in Figure 32. Of those coming from the vocational program, 53% were earning more than $12,000 and 19% were earning more than $15,000. The matriculation and general programs were similar with slightly more than 30% earning more than $12,000, while only 14% of those taking a business program were earning more than $12,000.

Career Satisfaction

Individual satisfaction with one's career is an important dimension approached by the Q3 question "How satisfied are you with the present progress of your career?" The results were: very satisfied - 28%, satisfied - 34.6%, moderately satisfied - 22%, only slightly satisfied - 7.7%, not satisfied at all - 5.4%.

Career satisfaction responses broken down by 1971 high school program give the results shown in Figure 33. Only 5.4% of those who had been enrolled in a Vocational Education program reported "only slightly" or "not at all" satisfied: this may be compared with 13.0% for the Matriculation program, 16.7% for the Business program and 18.3% for the General program.

Length of Time Finding First Employment

Seventy-two percent of the Q3 respondents reported finding their first employment during the first month of seeking employment. Others reported as follows: 1 to 2 months - 11.2%, 2 to 3 months - 5.1%, 3 to 4 months - 3.2% and more than 4 months - 8.7%.

Students who had been enrolled in the Vocational program found jobs earlier and all had been employed by the fourth month as shown in Table XXXVI.

TABLE XXXVI

LENGTH OF TIME IN FINDING EMPLOYMENT BY PROGRAM

	Length of Time Getting Employment				
Program Enrolled in 1971:	0 - 1 Month	1 - 2 Months	2 - 3 Months	3 - 4 Months	More Than 4 Months
Business	59.3	20.3	3.4	5.1	11.9
Vocational	84.2	10.5	0.0	5.3	0.0
Matriculation	73.5	10.3	4.7	3.1	8.3
General	68.5	10.3	8.2	2.1	11.0
Total	71.8	11.2	5.1	3.2	8.7

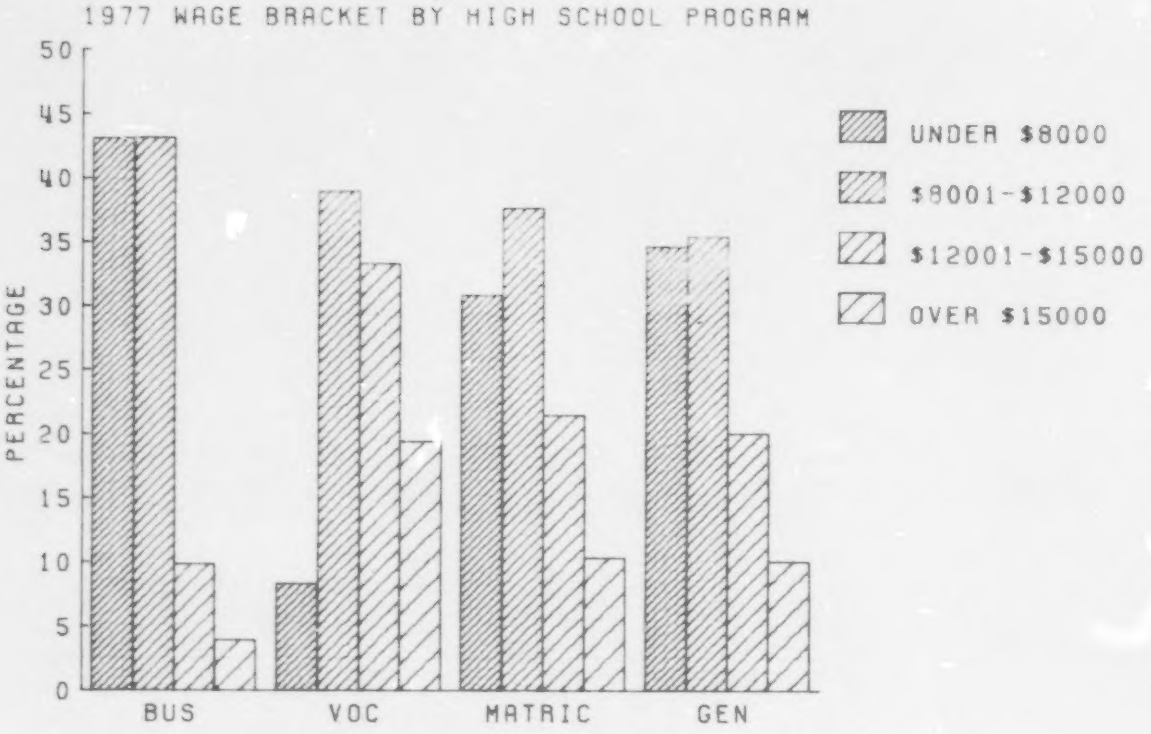

1977 WAGE BRACKET BY HIGH SCHOOL PROGRAM

Figure 32

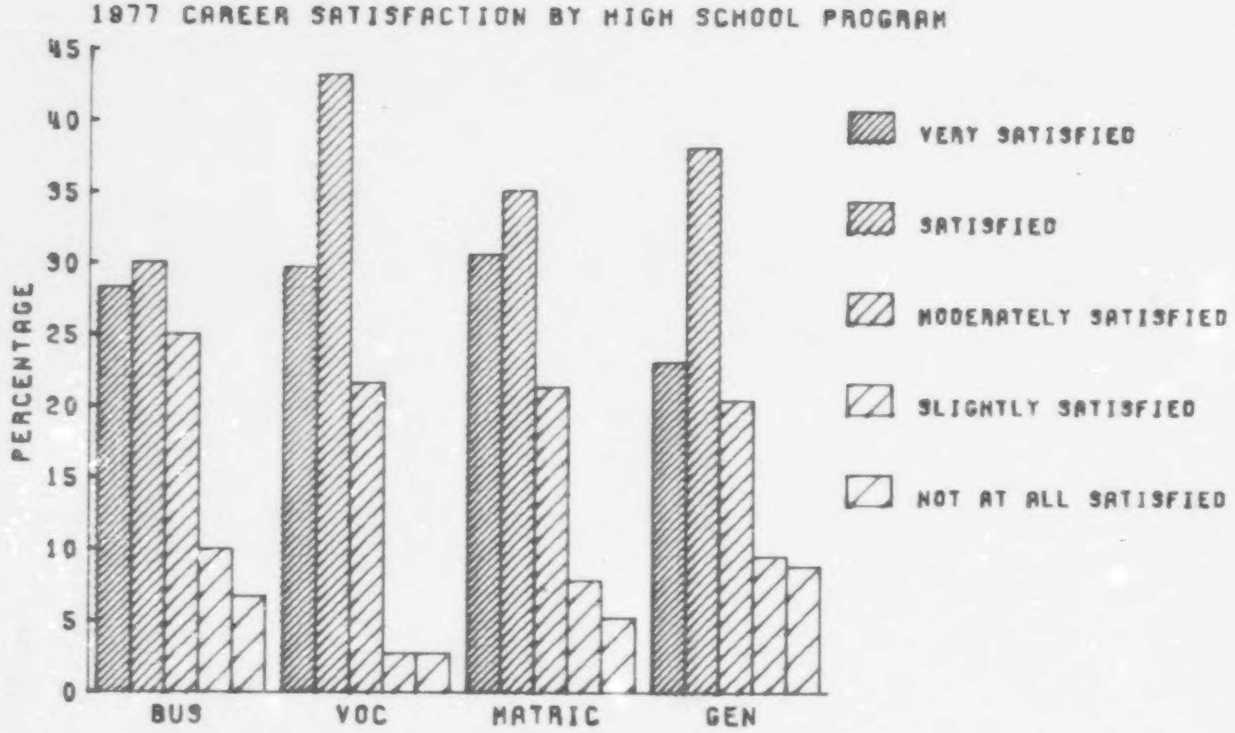

1977 CAREER SATISFACTION BY HIGH SCHOOL PROGRAM

Figure 33

Mobility

A check on mobility of the student was taken although the response to Q3 is probably biased towards the less mobile student due to the time lapse in following up these students.

Nevertheless, Figure 34 is presented to show the responses to the question "How far do you now live from the place where you received the major part of your high school education?"

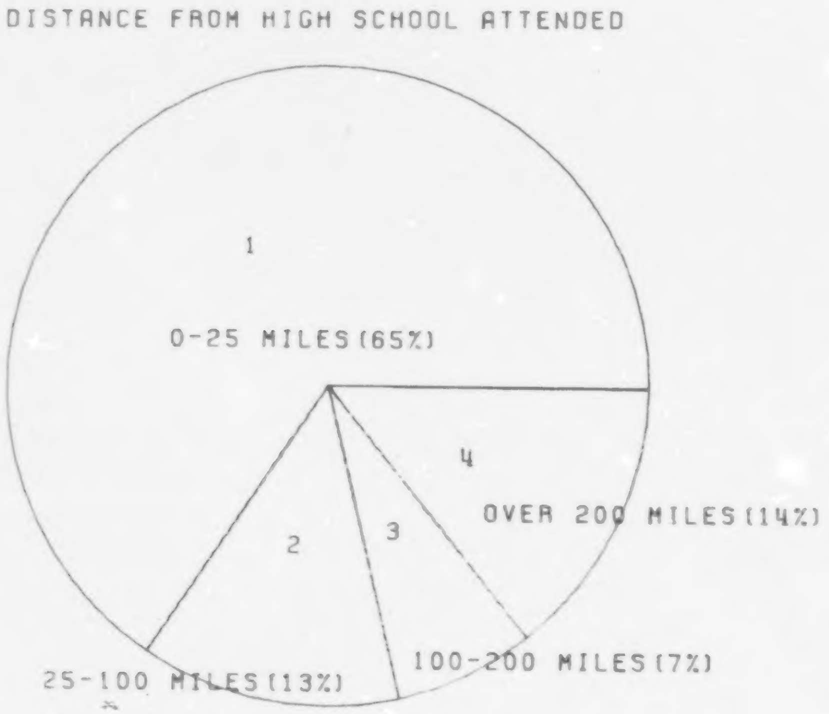
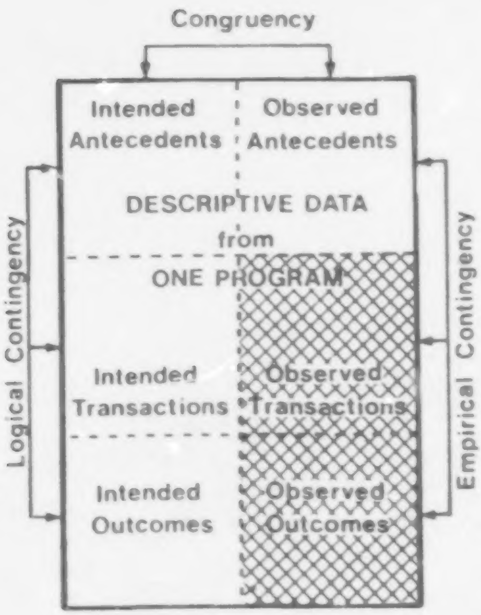


Figure 34

CLIENT EVALUATION

OF CURRICULUM


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes
Logical Contingency
Empirical Contingency

CHAPTER SEVEN

CLIENT EVALUATION OF CURRICULUM

Student-client feedback was collected regarding the adequacy of their high school program. Evaluative opinions were collected in five general areas:

(a) opinions regarding specific curriculum concerns at the time of the questionnaire,
(b) opinions of the adequacy of their high school program in meeting their needs in terms of the provincial curriculum general goals,
(c) opinions of the adequacy of their high school program in meeting their needs in terms of the provincial curriculum aims for each subject area,
(d) opinions regarding the effectiveness and prevalence of various teaching methods,
(e) evaluative opinions regarding various school services,
(f) evaluative opinions regarding various extra-curricular activities.

The major focus of this part of the evaluation was on the provincial goals/aims/objectives as laid down by the Program of Studies, these being the prime source of curriculum leadership to school districts and schools.

SPECIFIC CONCERNS

Examples given here show how an ongoing systematic evaluation program would seek feedback regarding specific concerns at the time of the questionnaire.

Work Experience and Special Projects

In 1971 and 1973 curriculum planners had need for information on how students felt about the Work Experience and Special Projects courses.

Work Experience. Limiting responses to those who had taken a Work Experience course, students were asked "...how do you feel it has contributed to your education?" Table XXXVII shows the responses.

TABLE XXXVII

CONTRIBUTION OF WORK EXPERIENCE TO EDUCATION

	Percentages of Participants	
	Q1 (1971)	Q2 (1973)
Very Well	28%	45%
Well	33%	25%
Some	25%	21%
Not at All	9%	6%
A Waste of Time	4%	3%

Special Projects. Again limiting responses to those who had been involved, students were asked to evaluate their special projects experience. Results are shown in Table XXXVIII.

TABLE XXXVIII

EVALUATION OF SPECIAL PROJECTS

	Percentages of Participants	
	Q1 (1971)	Q2 (1973)
Excellent	28%	34%
Quite Good	37%	35%
Good	24%	20%
Poor	6%	7%
A Disaster	5%	4%

Basics, Required Courses, Practical Courses, Counselling, Leisure Time

Currently questions exist concerning basics, required courses, practical courses and preparation for leisure time activities. Respondents to the 1977 (Q3) questionnaire provided some opinions on these questions.

Basics. Responses show some need for more emphasis on basic academic courses though not with a very large majority:

56% Agreed - School should have placed more emphasis on basic academic courses.

In the case of remedial help however, for those experiencing difficulty the response was emphatic:

87% Agreed - School should have provided more help for students who were having trouble with math, reading, and writing.

Required Courses. Relatively few ex-clients react negatively to the required courses in their high school program:

33% Agreed - Most required courses were a waste of time.

Practical and Vocational Courses. Strong support was received for more emphasis in the area of practical and vocational experiences:

79% Agreed - School did not offer enough practical work experience.

69% Agreed - School should have placed more emphasis on vocational and technical.

For those that had followed a General Program, the percentage agreeing to the need for more emphasis on vocational and technical increased to 74.5%.

Counselling. Significantly large proportions of those responding indicated an inadequacy in the counselling programs:

62% Disagreed - School provided me with counselling that has helped me continue my education.

For those in the Matriculation Program, the percentage disagreeing increased to 64.8%.

65% Disagreed - School provided me with counselling (50% Strongly) that has helped me find employment.

Concern here was greatest in the Matriculation Program with 68% indicating disagreement.

Leisure Time. Respondents were split on the need for more emphasis on preparation for leisure time. 47% agreed and 43% disagreed with the statement: "School should have placed more emphasis on subject areas that would have prepared me for leisure time activities." Eight percent indicated that it did not apply.

ADEQUACY IN ACHIEVEMENT OF GENERAL AIMS

The third student questionnaire (1977) sought feedback from former student-clients regarding their opinion of the adequacy of their high school program in meeting their needs in terms of the provincial curriculum general aims. In other words they were asked to personally evaluate their own high school experience in terms of the established provincial goals or the "intended outcomes."

Methodology

Each of the 35 sub-goal statements associated with each of the 12 Goals of Basic Education (Alberta Program of Studies) were presented in random order for evaluation with the following instructions:

> This section presents some of the general "aims" that have been established for Alberta high schools. (Not all of the aims are listed.)
>
> These aims, identified by the Department of Education, are general statements of what should be learned by students.
>
> How adequately did your high school program meet these general aims for you?
>
> Directions:
> Consider each claim listed below and circle the appropriate letters indicating your opinions of the adequacy of your education in regards to that aim.

Due to the overall length of the questionnaires, the sample was divided randomly into two sub-samples each evaluating half of the 35 goal statements. Relatively equal proportions responded within the two sub-samples.

Adequacy Ratings In Achievement Of Goals

Overall, respondents rated their own school experiences as 60% adequate. In other words, on the average for all objectives 40% of the respondents rated their school experience as not adequate.

While the respondents rated sub-goal statements, by averaging the ratings of the sub-goals for each goal we get the results presented in Table XXXIX. Goals receiving relatively high adequacy ratings include those of an academic nature; those dealing with social skills tend to cluster in the middle range; while more personal individual goals of leisure, beauty, management and the world of work receive low adequacy ratings.

Goals related to learning about the world of work indicate the most need for attention, although low ratings here are a result in part, of the particular selection of courses made by the majority of students.

TABLE XXXIX

ADEQUACY RATINGS OF GENERAL GOALS

	Average Adequacy Rating
1. Develop basic and special knowledge competencies	71%
2. Learn how to organize, analyze and use information in a critical and objective manner	70%
3. Develop skills in communication	65%
4. Practice and understand the ideas of health, fitness and safety	60%
5. Learn to respect and to get along with people of varying beliefs and life styles	58%
6. Develop a desire for learning	58%
7. Learn about and try to understand the changes that take place in the world	55%
8. Learn to be a good citizen	54%
9. Learn how to use leisure time	52%
10. Appreciate culture and beauty in the world	44%
11. Develop management skills	44%
12. Learn about the world of work	40%

Adequacy Ratings In Achievement of Sub-Goals. The areas of adequacy can be seen in more specificity when we examine the adequacy ratings of the sub-goals.
The sub-goals most adequately met include:

(a) Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences.
(b) Develop ability to organize information into meaningful categories.
(c) Develop skills of thinking and proceeding logically.
(d) Develop a fund of information and concepts.

The sub-goals least adequately met include:

(a) Develop skills in managing natural, financial and human resources.
(b) Develop interests which will lead to a wise and satisfying use of leisure time.
(c) Develop skills basic to the world of work.
(d) Develop ability to use information and counselling services related to career decisions.

A full listing of the 34 sub-goals and the percentage of respondents rating their needs as having been either "very adequately" or "adequately" met grouped under their respective goal statements is as follows:

1. Develop basic skills and special knowledge competencies:

   (a) Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences. 84%

   (b) Develop a fund of information and concepts. 68%

   (c) Develop special interests and abilities. 61%

2. Learn how to organize, analyze, and use information in a critical and objective manner:

   (a) Develop skills of thinking and proceeding logically. 76%

   (b) Develop ability to organize information into meaningful categories. 72%

   (c) Develop ability to apply scientific methods in the pursuit of and analysis of knowledge. 63%

3. Develop skills in communication:

   (a) Develop skill in oral and written languages. 71%

   (b) Develop skill in understanding the communication of others. 65%

   (c) Develop ability in communicating ideas and feelings effectively. 60%

4. Practice and understand the ideas of health, fitness and safety:

(a) Establish sound personal health habits. 63%

(b) Develop an understanding of good physical and mental health practices. .. 63%

(c) Establish a good physical fitness program. 54%

5. Learn to respect and to get along with people of varying beliefs and life styles:

(a) Develop appreciation and respect for the worth and dignity of individuals. .. 61%

(b) Learn to take into account the values of others when making personal choices. 60%

(c) Develop an understanding of functions, responsibilities and achievements of various societal institutions. 54%

6. Develop a desire for learning:

(a) Develop a positive attitude toward learning. 61%

(b) Develop intellectual curiosity and eagerness for lifelong learning. 56%

7. Learn about and try to understand the changes that take place in the world:

(a) Develop understanding of the past, identify with the present and the ability to meet the future. 57%

(b) Develop an awareness of and the ability to adjust to a changing social and physical environment. 56%

(c) Develop ability to adjust to the changing demands of Canadian society. .. 52%

8. Learn to be a good citizen:

(a) Develop an attitude of respect for public and private property. 66%

(b) Develop an understanding of the Canadian and other forms of government. 58%

(c) Develop an awareness of civic rights and responsibilities. 51%

(d) Develop an understanding of the obligation and responsibilities of Canadian and world citizenship. 48%

(e) Develop a feeling of cultural identity and heritage at national and international levels. 44%

9. Learn how to use leisure time:

(a) Develop a positive attitude toward participation in a range of leisure time activities - physical, intellectual and creative. 62%

(b) Develop interests which will lead to a wise and satisfying use of leisure time. 41%

10. Appreciate culture and beauty in the world:

(a) Cultivate appreciation for beauty in various forms. 49%

(b) Develop creative self-expression through various media including the fine and practical arts. 47%

(c) Develop special talents in the arts. ... 37%

11. Develop management skills:

(a) Develop an understanding of economic principles and responsibilities. 51%

(b) Develop skills in managing natural, financial and human resources. 37%

12. Learn about the world of work:

(a) Develop skills basic to the world of work. 41%

(b) Develop the ability to use information and counselling services related to career decisions. 39%

Adequacy of Sub-Goal Achievement By Program

The individual high school programs of each respondent had some common curriculum and some very different curriculum. Hence the particular program being evaluated varies when responding to an opinionnaire such as the one used in this study.

In comparing the responses of those who had experienced programs as defined by the "4-way" program categorization defined earlier, some differences are noted in Figure 35.

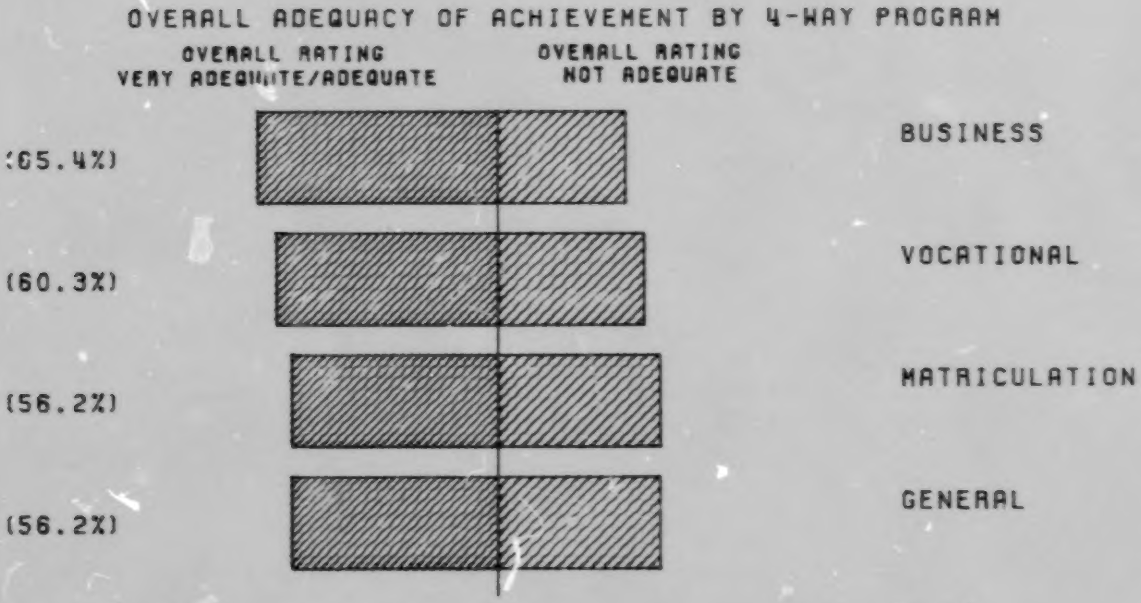


Figure 35

Those respondents who had followed a Matriculation program in Grade XI rated their high school programs as less adequate than the other three programs for 13 of the 34 sub-goals. Those who had followed the General program rated their programs as less adequate than the other three programs for 15 of the 34 sub-goals. There was however considerable agreement generally from one program to the next in the ratings of the sub-goals. A few notable exceptions are as follows:

(a) Relatively high for business -
    (i) develop skills of thinking and proceeding logically.
    (ii) develop appreciation and respect for the worth and dignity of individuals.
    (iii) develop skills basic to the world of work.

(b) Relatively low for matriculation -
    (i) develop a feeling of cultural identity and heritage at national and international levels.

(ii) develop skills in managing material, financial, and human resources.
(iii) develop the ability to use information and counselling services related to career decisions.

(c) Relatively high for matriculation -
(i) develop a positive attitude toward learning.

(d) Relatively low for general -
(i) develop skills basic to the world of work.

ADEQUACY IN ACHIEVEMENT OF SUBJECT AREA AIMS

In an attempt to provide province-wide feedback of the general effectiveness of the learning experiences within each subject area, the 1977 (Q3) questionnaire sought personal evaluations by those who had experienced courses from the various subject areas.

One extreme limitation of the approach used is that no attempt was made to control for the number of courses (or credits) taken within each subject area by each respondent. It could be expected that the rated adequacy of the aims of the subject area would increase as more courses were taken.

Methodology

Subject area objectives were taken from the Alberta Program of Studies, shortened and somewhat reworded in order to remove educational jargon. Respondents were asked to evaluate their high school program ONLY for those subject areas experienced, rating the adequacy of their education with regard to each objective of the various subject areas. The following instructions were given:

> This section lists the "aims" that have been established for each subject area offered by Alberta high schools.
>
> These aims, identified by the Department of Education, are statements of what should be learned by students in each subject area.
>
> How adequately did your high school program meet these subject area aims for you?
>
> Directions:
>
> 1. Check each subject area in which you took at least one course.
> 2. For each subject area checked, circle the appropriate letters indicating the adequacy of your education in regards to each stated aim.

All respondents were mailed this part of the questionnaire; specific numbers of responses vary for each subject area.

Average Adequacy Rating Of The Subject Areas

How adequately do the various subject areas meet their objectives for the students involved? Average percentages were calculated for each subject area of the students rating the objectives as having been either "very adequately" or "adequately" met in relation to their needs. Figure 36 shows a profile of the adequacy rating of each subject area.

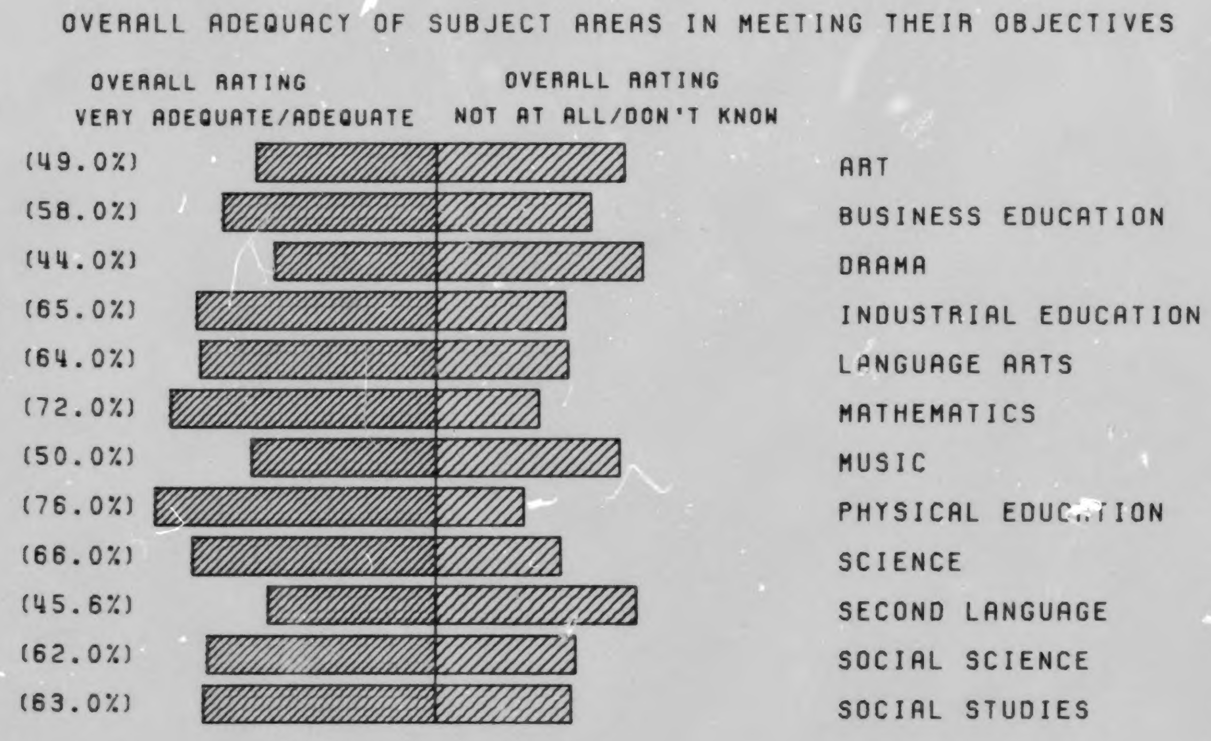


Figure 36

It should be noted that in the case of Drama, Art and Music larger proportions of responses were in the category "Don't Know". One possible reason for this is that the objectives as stated were not clearly understood by those answering the questionnaire.

Objectives Rated Within Subject Areas

It is important for provincial curriculum builders to know how well each subject area is achieving the various objectives they have set out. Complete responses are shown in Appendix D. A brief overview of the adequacy of each subject area in meeting their respective objectives follows. The subjects are presented in rank order on overall (average) adequacy rating and each objective shows an adequacy rating which is the percentage of respondents rating the objective as "very adequate" or "adequate".

Physical Education. 81 % responded as having taken at least one course from this area. Overall adequacy rating was 76%. Adequacy ratings for each objective were:

(a) To develop the ability to get along well with others. 81%

(b) To develop recreational skills. 79%

(c) To develop a strong body. 74%

(d) To develop an interest in physical activities for leisure time. 72%

Mathematics. 96% responded as having taken at least one course from this area. Overall adequacy rating was 72%. Adequacy ratings for each objective were:

(a) To develop the ability to understand and solve a problem. 81%

(b) To understand and apply mathematical operations and concepts. 76%

(c) To develop precision in thought and expression 69%

(d) To appreciate the contribution of mathematics to progress. 61%

Science. 91% responded as having taken at least one course from this area. Overall adequacy rating was 66%. Adequacy ratings for each objective were:

(a) To learn fundamental scientific ideas. . 90%

(b) To understand and use scientific methods. 86%

(c) To develop scientific attitudes, interests, and values. 74%

(d) To understand the role of science in societies' development. 70%

(e) To understand social problems that are

	either caused, or solved through science.	50%
(f)	To connect scientific knowledge with vocational skills and opportunities.	48%
(g)	To understand moral and ethical problems in science.	47%

Industrial Education. 40% responded as having taken at least one course from this area. Overall adequacy rating was 65%. Adequacy ratings for each objective were:

(a)	To develop appropriate attitudes	67%
(b)	To provide practical academic application of academic knowledge.	67%
(c)	To develop basic skills to enter either a job or a post high school institution	62%
(d)	To develop skills for entry into an occupation.	61%

Language Arts. 82% responded as having taken at least one course from this area. Overall adequacy rating was 64%. Adequacy ratings for each objective were:

(a)	To develop the ability to communicate clearly in speech and writing.	73%
(b)	To develop an understanding of language arts for personal enjoyment.	70%
(c)	To appreciate style changes in the English language.	61%
(d)	To develop a personal value system through the examination of the value systems of others.	52%

Social Studies. 91% responded as having taken at least one course from this area. Overall adequacy rating was 63%. Adequacy ratings for each objective were:

(a)	To recognize information relevant to social problems.	74%
(b)	To develop an awareness of values.	74%
(c)	To choose among a variety of values.	69%
(d)	To defend ones' choice of alternatives.	64%

(e) To use information to propose a solution to social problems.	60%
(f) To respond to the feelings and ideas of others without compromising individual value system.	60%
(g) To develop the ability to choose from all known alternatives.	56%
(h) To take action on the chosen alternatives.	55%
(i) To develop a consistent, defensible system of values based on those choices.	54%

Social Sciences. 48% responded as having taken at least one course from this area. Overall adequacy rating was 62%. Adequacy ratings for each objective were:

(a) To understand basic social science concepts.	74%
(b) To understand modes of inquiry and skills unique to the social sciences.	59%
(c) To understand how knowledge is produced in a particular discipline.	53%

Business Education. 52% responded as having taken at least one course from this area. Overall adequacy rating was 58%. Adequacy ratings for each objective were:

(a) To develop useful business knowledge and skills.	72%
(b) To develop problem solving abilities.	61%
(c) To give practical experience in the application of business skills.	59%
(d) To develop business skills of individual interest.	57%
(e) To apply business skills to other areas.	56%
(f) To develop an understanding of the operation of a business.	55%
(g) To develop individuality in thought and action.	48%

Music. 29% responded as having taken at least one course from this area. Overall adequacy rating was 50%. Adequacy ratings for each objective were:

(a) To recognize ones' own musical abilities.	56%
(b) To become aware of the basic importance of music in life.	53%
(c) To understand ways of communicating through music.	50%
(d) To develop an appreciation of music past and present.	47%
(e) To increase ones' self-confidence.	44%

Art. 42% responded as having taken at least one course from this area. Overall adequacy rating was 49%. Adequacy ratings for each objective were:

(a) To develop an appreciation of artistic design.	61%
(b) To develop individual artistic skills.	57%
(c) To apply artistic design principles in art and everyday living.	44%
(d) To develop an understanding of past and present art.	33%

Drama. 29% responded as having taken at least one course from this area. Overall adequacy rating was 44%. Adequacy ratings for each objective were:

(a) To develop concentration.	52%
(b) To obtain freedom and control in physical movement.	47%
(c) To develop sensory distinction.	46%
(d) To encourage further interest in drama.	54%
(e) To communicate, through drama, an awareness of the current world issues.	31%

Second Language. 65% responded as having taken at least one course from this area. Overall adequacy rating was 41%. Adequacy ratings for each objective were:

(a) To understand the structure and use of a second language. 67%

(b) To understand the language when spoken at a normal speed. 44%

(c) To speak the language well enough to communicate. 41%

(d) To write anything one can say in the language. 31%

(e) To appreciate the contributions of the people whose language is studied. 26%

(f) To develop an understanding of the people whose language is studied. 24%

EFFECTIVENESS AND PREVALENCE OF VARIOUS TEACHING METHODS

Many operational (transactional) factors influence the effectiveness of the delivery of learning opportunities to the student. Team evaluations and the use of self-evaluation criteria have focused on many of these for years. One of these factors chosen for evaluative feedback from the student-client was the type of teaching method used.

A general question, asking students to rate their "Classroom Activities" was presented in Q1 and Q2. On a rating scale of 5 down to 1, the mean ratings (maximum possible 5) were as follows:

(a) Questionnaire 1 (while in grade eleven) ... 3.00
(b) Questionnaire 2 (after completion) 2.61

On Q2, out of 1,468 responses, 478 rated their classroom activities as only "fairly good" and 213 rated "poor"!

Effectiveness of Learning Activities (Q1)

In a more specific attempt to evaluate the effectiveness of various learning activities and also to determine preferred learning activities for different groups of students, the Grade XI respondents to Q1 were asked to rate ten different learning activities. This rating was again asked for on the second questionnaire (Q2) just after the student-clients had for the most part left school. Since not all categories of activities were mutually exclusive this presents some difficulty in interpreting some of the results.

Students were asked "Please evaluate each of the following learning activities in terms of how well they help you learn." The percentage of students responding in each category are shown in Table XL along with a mean score where 5 was assigned to the excellent ranking and down to 1 for a poor ranking. Activities are roughly ranked according to their mean rating.

TABLE XL

EFFECTIVENESS OF LEARNING ACTIVITIES (Q1)

		Percentage of Respondents Rating				
Method	Mean Score	Excellent	Very Good	Good	Fairly Good	Poor
Practical Activities	3.88	36.6	26.2	27.7	7.9	1.6
Class Discussions	3.50	19.1	32.3	32.2	12.8	3.7
Laboratory Experiments	3.49	22.6	30.8	25.9	14.9	5.8
Teacher Demonstration	3.48	16.1	33.3	35.3	13.0	2.3
Individual Projects	3.47	21.9	28.5	30.0	14.6	5.0
Class or Group Projects	3.14	10.4	26.8	36.6	19.0	7.2
Small Group Discussion	2.99	11.2	25.0	30.2	22.2	11.4
Library Research	2.87	8.8	19.5	34.2	25.1	12.4
Language Laboratory	2.82	10.5	18.0	30.6	24.9	16.0
Teacher Lectures	2.57	4.1	15.2	34.0	27.3	19.4

Effectiveness of Learning Activities (Q1) According to Past Achievement. A breakdown of the above results was undertaken based on the average Grade IX Departmental marks. The sample was divided into two groups, Group 1 - those below the mean of Departmental averages, and Group 2 - those above the mean.

The ratings of the two groups differed significantly as follows:

1. Overall the group of lower achievers rated the effectiveness of the activities lower.
2. Two activities were rated higher by the lower achiever and two activities were rated about the same by the two groups.
3. The remaining six activities were rated higher by

the higher achieving group.

Table XLI shows the preferred learning activities for each group. It appears that the higher achiever tends to prefer learning activities of a more "individual" nature, while the lower achiever tends to prefer more "social" learning activities. While the difference between the two groups was greatest for "practical activities" it is important to note that this was still the most preferred learning activity for both groups.

TABLE XLI

PREFERRED LEARNING ACTIVITIES BY PAST ACHIEVEMENT (Q1)

Rated Higher By Lower Achievers	Rated the Same By Both Groups	Rated Higher By Higher Achievers
	class discussion	
small group discussion		practical activities, language laboratory
	library research	
class or group projects		laboratory experiences, individual projects, teacher lecture teacher demonstration

Effectiveness of Learning Activities (Q2)

The same question was asked of the respondents in 1973 on the second student questionnaire with similar results, although shifts in rankings did occur. Table XLII displays the results from Q2, ranked according to the mean rating. A notable upward shift occurred for "individual projects" while a similar downward shift occurred in the rating of laboratory experiments.

Effectiveness of Activities According to Achievement (Q2). Generally similar results were received as discussed above from Q1. Some changes did occur which only seem to emphasize the generalization of the lower achiever preferring more "social" learning activities. Table XLIII shows the preferred learning activities on the second questionnaire. Changes from the first questionnaire include:

TABLE XLII

EFFECTIVENESS OF LEARNING ACTIVITIES (Q2)

			Percentage of Respondents Rating				
Method	Q2 Mean Score	Q1 Mean Score	Excellent	Very Good	Good	Fairly Good	Poor
Practical Activities	4.03	3.88	42.2	28.1	22.6	5.1	1.9
Individual Projects	3.67	3.47	27.8	31.6	25.2	11.0	4.4
Teacher Demonstration	3.52	3.48	18.4	35.9	29.4	11.4	4.8
Class Discussions	3.47	3.50	22.1	29.5	28.1	14.5	5.9
Laboratory Experiments	3.37	3.49	23.1	26.1	25.1	16.4	9.3
Small Group Discussion	3.20	2.99	19.0	24.3	25.7	19.5	11.6
Class or Group Projects	3.09	3.14	13.3	23.3	33.0	20.6	9.7
Library Research	3.00	2.87	12.5	21.2	32.3	22.6	11.4
Teacher Lectures	2.88	2.57	8.2	21.0	35.6	21.7	13.5
Language Laboratory	2.62	2.82	7.9	16.8	28.0	24.5	22.9

TABLE XLIII

PREFERRED LEARNING ACTIVITIES BY PAST ACHIEVEMENT (Q2)

Rated Higher By Lower Achievers	Rated the Same By Both Groups	Rated Higher By Higher Achievers
class discussion	teacher demonstration	teacher lecture, individual projects, library research
small group discussion		laboratory experiments, language laboratory,
class or group projects		practical activities

1. Class discussion shifted from the "same" rating to being rated higher by the lower achiever.
2. Teacher demonstration shifted to nearly the "same" rating by both groups.
3. Library research was rated higher by the higher achieving groups.
4. The difference in the rating of "practical activities" was considerably lower than in the first questionnaire.

Prevalence of Learning Activities

If differences exist in the effectiveness of various learning activities (teaching methods), how often are these methods used? How often are they used in various subject areas, which may in fact influence the extent to which subject area aims are achieved?

Students (Q1) were asked to report which learning activity was "used most often" for each subject area from which they were taking courses.

Overall Prevalence. Without reference to subject areas, a tally was made to determine the extent to which each learning activity was identified as the method most often used. The results follow in Table XLIV.

TABLE XLIV

PERCENTAGE OF RESPONSES IDENTIFYING ACTIVITY AS MOST OFTEN USED

Activity	% Most Often Used
Teacher Lecture	34%
Individual or Group Projects (Combined)	19%
Teacher Demonstration	16%
Practical Activities	13%
Class Discussion	11%
Small Group Discussion	2%
Laboratory Experiments	2%
Language Laboratory	2%
Library Research	1%

If we relate back to the effectiveness of these activities we see that schools are spending the most time offering the least effective activity as viewed by this group of students, and specially so for the lower achiever.

Activity Prevalence in Subject Areas. The prevalence of the various learning activities differed significantly from one subject area to the next. Here the fact that not all categories are mutually exclusive leaves difficulty in interpreting some of the results as they appear in Table XLV.

It is interesting to speculate why, for example, the lecture method is more prevalent in Social Studies and Science than it is in Language Arts and Mathematics - and what effect this has on the effective delivery of the curriculum in each area. Or, whether there is a relationship between the fact that Physical Education is able to make most use of the most effective learning activities and the report earlier in this chapter that it also was rated as the highest in achievement of objectives. Or, to what extent is the low adequacy rating, reported earlier, in Second Languages related to the poor effectiveness rating of the language laboratory?

EVALUATIVE OPINIONS - SCHOOL SERVICES

Three specific "non-curricular" school services were identified for evaluative feedback from the student-client: (a) guidance, (b) library, and (c) cafeteria. Each was rated on a 5 point scale ranging excellent, very good, good, fairly good, and poor.

Table XLVI presents the results, showing mean ratings for the three services. Guidance services were reported as "not offered" by 5.5% of the Q1 respondents and Cafeteria Services were reported as "not offered" by 35.7% of the Q1 respondents.

TABLE XLVI

EVALUATIVE RATINGS OF SCHOOL SERVICES

			Percentages			
Service	Mean	Excellent	Very Good	Good	Fairly Good	Poor
1. Guidance Q1	3.00	13.9	26.7	29.0	16.5	13.6
Guidance Q2	2.67	10.2	20.2	23.1	22.4	24.1
2. Library Q1	3.07	12.1	25.1	30.7	19.6	11.2
Library Q2	3.06	11.6	25.3	32.1	21.4	9.7
3. Cafeteria Q1	3.00	13.3	23.8	29.4	16.6	16.7
Cafeteria Q2	2.71	10.4	21.2	26.0	22.0	20.4

TABLE XLV

MOST USED LEARNING ACTIVITIES BY SUBJECT AREA

(Showing Q1 Effectiveness Rankings)

Subject Area	Most Used Activities	%	Effectiveness Ratings
Physical Education	1. Practical Activities	60.8	1
	2. Teacher Demonstration	17.6	2
	3. Ind. or Group Projects	16.9	3
Mathematics	1. Teacher Demonstration	41.9	2
	2. Teacher Lecture	39.0	5
Science	1. Teacher Lecture	49.3	5
	2. Teacher Demonstration	17.6	2
	3. Laboratory Experiments	14.8	2
Industrial Education	1. Ind. or Group Projects	29.0	3
	2. Practical Activities	27.1	1
	3. Teacher Lecture	22.0	5
	4. Teacher Demonstration	11.1	2
Language Arts	1. Teacher Lecture	37.3	5
	2. Class Discussions	30.0	2
	3. Ind. or Group Projects	20.0	3
Social Studies	1. Teacher Lecture	50.4	5
	2. Class Discussions	18.0	2
	3. Ind. or Group Projects	17.8	3
Business Education	1. Practical Activities	32.5	1
	2. Ind. or Group Projects	28.6	3
	3. Teacher Lecture	19.3	5
	4. Teacher Demonstration	15.0	2
Fine Arts	1. Ind. or Group Activities	58.6	3
	2. Practical Activities	22.4	1
Second Languages	1. Teacher Lecture	33.9	5
	2. Language Lab.	20.4	5
	3. Teacher Demonstration	20.2	2
Home Economics	1. Ind. or Group Project	51.9	3
	2. Practical Activities	21.1	1
	3. Teacher Demonstration	15.1	2
Industrial Arts	1. Ind. or Group Activities	54.2	3
	2. Practical Activities	18.6	1
	3. Teacher Demonstration	15.0	2

Generally, the ratings average out to "good" on the Q1 responses. In the case of the Guidance Services and Cafeteria Services the respondents tended to rate them lower after they had left school (Q2). Ratings of the Library Services remained essentially the same over the two questionnaires.

EVALUATIVE OPINIONS - EXTRA-CURRICULAR ACTIVITIES

Sports, Students' Union, general social activities, dances, clubs, and school spirit were all evaluated by the student-client through the first two questionnaires.

The extra-curricular activity receiving the highest ratings was "sports", while the lowest was "overall school spirit". As was the case for school services, the ratings tended to be lower on the second questionnaire. A summary of the results is presented in Table XLVII, with averages calculated on a 5 - 1 rating scale.

Based on these ratings it would appear that schools need to do something about improving their extra-curricular offerings in areas other than sports.

TABLE XLVII

RATINGS OF EXTRA-CURRICULAR ACTIVITIES

Percentages

Activity	Mean	Excell.	Very Good	Good	Fairly Good	Poor	Don't Know
1. Sports Q1	3.56	22.8	31.2	24.9	12.7	4.6	3.4
Sports Q2	3.44	21.5	30.0	26.1	16.8	4.7	-
2. Students' Union Q1	2.56	4.2	17.4	28.7	22.5	22.1	4.6
Students' Union Q2	2.35	4.2	13.3	25.3	29.5	27.7	-
3. General Social Activities Q1	2.38	2.4	11.3	28.6	27.8	22.5	5.9
General Social Activities Q2	2.45	3.9	12.4	30.2	31.6	21.8	-
4. School Dances Q1	2.52	5.3	15.6	24.5	22.0	24.0	5.8
School Dances Q2	2.48	5.7	14.4	27.2	27.7	25.0	-
5. School Clubs Q1	2.42	2.7	10.6	21.9	22.5	18.9	16.5
School Clubs Q2	2.33	4.4	12.3	27.2	26.7	29.3	-
6. Overall School Spirit Q1	2.06	3.3	9.3	19.4	24.0	41.3	2.0
Overall School Spirit Q2	2.22	5.4	12.2	18.9	24.9	38.6	-

SELECTED UNSOLICITED NOTES ATTACHED TO RETURN QUESTIONNAIRES

Using my experience at school I found that instead of stimulating the love of learning, the institution stifled my desire to learn. I can't isolate what factors contributed to arousing my rather negative view to formal learning or whether my experience is totally subjective. However, I do feel that one remedy may have been to have had the size of classes reduced thereby making the student-teacher relationship more intimate and personal.

I feel the schools of today are not preparing students for entry into the real world. Skills in basics of responsibilities, how to relate with others, and how to manage own affairs are neglected.

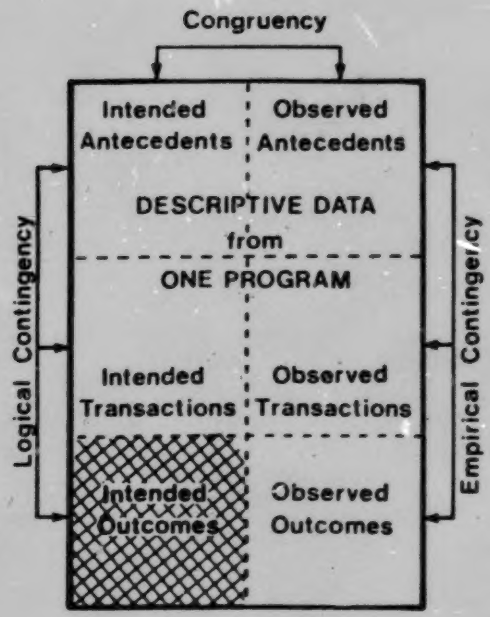
To me, my education seemed quite invalid, as none of my educators displayed much enthusiasm for knowledge themselves. It was really quite boring! I also felt that all the academic subjects where treated in such a way that it was very hard to get any practical purpose out of them.

I sort of regret not getting a good education. I never really received any training in expressing my feelings and other things. I don't know how to communicate with other people, this is where I think my education failed me. There's times when I would've like to be a lawyer or someone else instead of being a bodyman and painter. An education would and could of changed things. Probably the reason I did what I did was because the education I received wasn't very good.

I am very much against the trend toward "value-making" that the social studies has taken.

The aims of second language learning are far too advanced. I have taken French at University and in immersion courses in Quebec, and I believe your objectives are too high for the high school level.

FUTURE DIRECTIONS


Congruency
Intended Antecedents
Observed Antecedents
DESCRIPTIVE DATA from ONE PROGRAM
Logical Contingency
Empirical Contingency
Intended Transactions
Observed Transactions
Intended Outcomes
Observed Outcomes

CHAPTER EIGHT

FUTURE DIRECTIONS

The final part of this evaluation project focused on student-client feedback on what importance should be placed on various aspects of the high school curriculum in the future. This was an attempt to identify "intended outcomes" for comparison in future evaluations and to give some direction to current curriculum planning and resource allocation.

In the first and second questionnaires (Q1 and Q2), only three general questions were asked, seeking importance ratings on selected curriculum goals. The third questionnaire however included a more global approach which would identify ratings of importance of each of subject area objectives and rankings of the goals of secondary education based on importance.

Q1 and Q2 - Selected Goal Ratings

The goals selected for importance rating in the first two questionnaires were:

(a) provide information to help make an occupational choice,
(b) prepare for future leisure-time activities,
(c) develop occupational skills.

The same three questions were asked on both Q1 and Q2, the results follow in Table XLVIII

TABLE XLVIII

SELECTED GOAL RATINGS

	Percentage Rating					
	Q1			Q2		
	Very Imp.	Imp.	Not Imp.	Very Imp.	Imp.	Not Imp.
1. Occupational Choice	57.0%	34.0%	8.6%	78.3%	19.7%	2.0%
2. Leisure-Time Activities	19.5%	48.2%	32.3%	38.1%	48.2%	13.7%
3. Occupational Skills	60.1%	34.0%	5.9%	66.1%	29.4%	4.6%

The following observations may be made:

1. Students rate the development of occupational skills as very important.
2. Students rate the provision of information for occupational choice as very important.

For each of the three goals rated, the importance rating went up for the second questionnaire (Q2). This may have been the result of a shift in attitude over the intervening two years.

Further, while the development of occupational skills was the most important for the group while in grade eleven (Q1), the later ratings (Q2) show the provision of information to help make occupational choices as the most important of the three goals.

Preparation for leisure is significantly less important than preparation for an occupation. In the first questionnaire almost one third of the respondents indicated that preparation for leisure was not important.

IMPORTANCE OF GENERAL AIMS

The 1977 Alberta Program of Studies lists 12 Goals of Basic Education. Each of these twelve goals are further illustrated by a total of 35 "sub-goal" statements. How important are each of these "aims" or "goals" for the future high school?

Methodology

The 35 sub-goal statements were presented in a Thurstone's "paired comparisons" approach as described in Torgerson[1]. Due to the large number of pairs (595) a "matrix sampling" of items was utilized with different sets of pairs being mailed to 14 different sub-samples within the total student-client sample.

The paired statements were presented with the following instructions:

> This section seeks your opinion regarding the importance of some of the general aims for high schools.
> Each of these general aims is a statement of what should be learned by high school students.
>
> Directions:
> 1. Consider each pair of aims and mark with an "X"

---

[1] Torgerson W.S. Theory And Methods Of Scaling. New York: John Wiley & Sons Inc. 1967.

the one aim in each pair which you consider most important for the high school of today.
2. Please do not omit any pair, even if it is difficult to make a choice.

The "paired comparisons" methodology permits not only ranking, but also establishes scale values; in this report the scale values are presented as percentiles.

35 Sub-Goals Ranked

Analysis of the selection of each goal when paired with each of the other 34 sub-goals results in scale values for each sub-goal.

"Skill" goals appear to be rated higher than "knowledge" or "attitudinal" goals, and goals relating to the development of the individual potential appear generally more important than social or aesthetic types of goals.

Learning ability, communication skills and management skills are amongst the top ranked objectives, as the most important sub-goals include:

(a) Develop ability in communicating ideas and feelings.
(b) Develop skills of thinking and proceeding logically.
(c) Develop intellectual curiosity and eagerness for lifelong learning.
(d) Develop a positive attitude toward learning.
(e) Develop skills in managing natural, financial or human resources,

while the sub-goals ranked least important include:

(a) Develop special talents in the arts.
(b) Cultivate appreciation for beauty in various forms.
(c) Establish sound personal health habits.
(d) Develop a feeling of cultural identity.
(e) Develop a fund of information and concepts.

The following is a rank order listing of the 34 sub-goals. The number shown is the scale value presented as a percentile:

1. Develop ability in communicating ideas and feelings. 96

2. Develop skills of thinking and proceeding logically. 96

3. Develop intellectual curiosity and eagerness

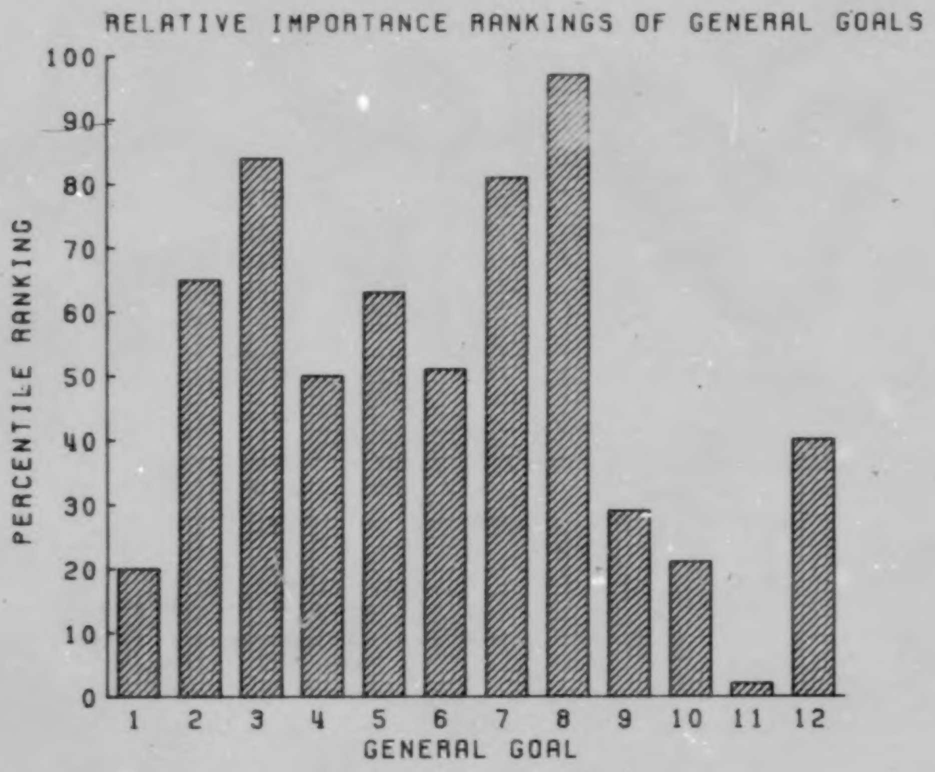
	for lifelong learning.	94
4.	Develop a positive attitude toward learning.	94
5.	Develop skills in managing natural, financial and human resources.	92
6.	Develop appreciation and respect for the worth and dignity of individuals.	89
7.	Develop skill in understanding the communication of others.	86
8.	Develop an awareness of and the ability to adjust to a changing social and physical environment.	84
9.	Learn to take into account the values of others when making personal choices.	74
10.	Develop understanding of the past, identify with the present and the ability to meet the future.	74
11.	Develop skills basic to the world of work.	66
12.	Develop special interests and abilities.	66
13.	Develop an understanding of good physical and mental health practices.	59
14.	Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences.	56
15.	Develop an understanding of economic principles and responsibilities.	55
16.	Develop a positive attitude toward participation in a range of leisure time activities - physical, intellectual and creative.	54
17.	Develop a feeling of pride in achievement and progress.	52
18.	Develop an attitude of respect for public and private property.	51
19.	Develop skill in oral and written languages.	44
20.	Develop the ability to use information and counselling services related to career decisions.	42

21. Develop an awareness of civic rights and responsibilities.	36
22. Develop ability to adjust to the changing demands of Canadian society.	35
23. Develop creative self-expression through various media including the fine and practical arts.	31
24. Develop an understanding of the obligation and responsibilities of Canadian and world citizenship.	30
25. Develop ability to organize information into meaningful categories.	26
26. Develop interests which will lead to a wise and satisfying use of leisure time.	22
27. Develop ability to apply scientific methods in the pursuit of and analysis of knowledge.	21
28. Establish a good physical fitness program.	21
29. Develop an understanding of functions, responsibilities and achievements of various societal institutions.	20
30. Develop an understanding of the Canadian and other forms of government.	18
31. Develop a fund of information and concepts.	18
32. Develop a feeling of cultural identity and heritage at national and international levels.	16
33. Establish sound personal health habits.	15
34. Cultivate appreciation for beauty in various forms.	5
35. Develop special talents in the arts.	1

12 General Goals Ranked

The 12 general goal statements were not presented for evaluation as such, but inferences can be drawn from the selecton of the various sub-statements over other sub-statements. Two approaches were taken, with very similar results.

Representation. In that each of the sub-goal statements were developed as explanatory statements of the goal statements, it may be assumed that they each represent the goal that they seek to explain. By treating each substatement as a representative of the more global goal, prior to analysis, we can then precede with calculating scale values of each of the 12 general goals. Figure 37 presents a graphic display of the results showing the percentile rating for each of the 12 goal statements.



1. Learn to be a good citizen (20%-ile).
2. Learn about and try to understand the changes that take place in the world (65%-ile).
3. Develop skills in communication (listening, speaking, reading, writing, viewing) (84%-ile).
4. Learn how to organize, analyse and use information in a critical and objective manner (50%-ile).
5. Learn to respect and to get along with people of varying beliefs and life styles (63%-ile).
6. Learn about the world of work (51%-ile).
7. Develop management skills (81%-ile).
8. Develop a desire for learning (97%-ile).
9. Learn how to use leisure time (29%-ile).
10. Practice and understand the ideas of health, fitness and safety (21%-ile).
11. Appreciate culture and beauty in the world (2%-ile).
12. Develop basic and special knowledge compentencies (40%-ile).

Figure 37

Averaging. An alternate approach in achieving relative percentile rating of the 12 general goal statements is to find the mean percentile rating of the explanatory sub-goals. In the averaging approach some changes result in the percentile score; however, no changes result in the rank order of the 12 Goals Of Basic Education.

Priorities

While the Alberta Program of Studies emphasizes that no priority is affixed to the various goal statements, the results of this study show significantly different weightings of importance placed by this sample of ex-clients of our school system. And, while the Department of Education does not want to prescribe priorities to these goals, it does influence priorities through:

(a) diploma requirements,
(b) course curriculum requirements,
(c) resource allocations through special grants, etc.

Hence, the perceived needs and opinions of the students and the ex-student should be considered when making such curriculum decisions.

IMPORTANCE OF SUBJECT AREA OBJECTIVES

Feedback on the importance of the various subject area objectives may be important for three reasons:

(a) emphasis in general curriculum guidelines toward specific subject areas,
(b) emphasis within each subject area toward identified areas of importance,
(c) point to the need for greater clarity in the statement of subject area objectives as these provide the major curriculum leadership to schools.

Methodology

Subject area objectives were taken from the Alberta Program of Studies, shortened and somewhat reworded in order to remove educational jargon. Items were then randomly ordered with the subject area not specifically identified, divided into two sub-parts and presented under the following instructions with a Likert-type response mechanism.

> In this section your opinions are requested regarding the importance of the various subject area aims.
> Only a portion of these aims are listed below and you are asked to indicate how important you think each objective is for the high school of today.

Directions:

1. Please circle the symbol under the phrase that best describes your opinion of the importance of each aim.

Importance Ratings of Objectives

Each response was assigned a numerical value as follows:

(a) very important	4
(b) quite important	3
(c) slightly important	2
(d) not important	1

The subject area objectives receiving highest and lowest ranking show some similarity to the ranking of the general goal statements reported earlier. The low rating of some objectives may be attributed to a lack of understanding of what was meant.

Most Important and Least Important. The objectives range from a mean of 3.794 (97.8% rated with "very" or " quite" important) down to a mean of 1.811 with almost 80% rating either "slightly" or "not" important. In between the two extremes the 64 objectives are distributed with no clearly defined groupings.

The five objectives rated most important however include:

(a) To develop the ability to understand and solve a problem.
(b) To develop the ability to communicate clearly in speech and writing.
(c) To increase ones' self-confidence.
(d) To develop the ability to get along well with others.
(e) To develop appropriate attitudes and work habits.

The five objectives rated least important include:

(a) to develop concentration in drama.
(b) To develop sensory distinction in drama.
(c) To encourage further interest in drama.
(d) To communicate, through drama, an awareness of the current world issues.
(e) To develop an understanding of past and present art.

Rank Order Listing. Following is a rank order listing of all of the subject area objectives. The figure shown is the average rating over all the respondents. Maximum score have rated the objective "very important" would be 4.000.

1.	To develop the ability to understand and solve a problem.	3.794
2.	To develop the ability to communicate clearly in speech and writing.	3.711
3.	To increase ones' self-confidence.	3.691
4.	To develop the ability to get along well with others.	3.669
5.	To develop appropriate attitudes and work habits.	3.629
6.	To develop an awareness of values.	3.618
7.	To develop individuality in thought and action.	3.574
8.	To develop an ability to choose from all known alternatives.	3.574
9.	To develop in thought and expression.	3.537
10.	To provide practical application of academic knowledge.	3.507
11.	To develop basic skills to enter a job.	3.460
12.	To develop problem solving abilities.	3.439
13.	To develop skills for entry into an occupation.	3.437
14.	To defend ones' choice of alternatives.	3.436
15.	To develop basic skills to enter a post high school institution.	3.370
16.	To take action on chosen alternatives.	3.345
17.	To respond to the feelings and ideas of others without compromising individual value system.	3.326
18.	To develop useful business knowledge and skills.	3.317
19.	To choose among a variety of values.	3.222
20.	To give practical experience in the application of business skills.	3.167
21.	To develop an understanding of the	

	operation of a business.	3.140
22.	To develop a consistent, defensible system of values based on those choices.	3.132
23.	To apply business skills to other areas.	3.128
24.	To develop business skills of individual interest.	3.074
25.	To develop an interest in physical activities for leisure time.	3.056
26.	To connect scientific knowledge with vocational skills and opportunities.	3.051
27.	To recognize information relevant to social problems.	3.017
28.	To develop a personal value system through examination of the value systems of others.	3.014
29.	To use information to propose a solution to social problems.	2.994
30.	To develop recreational skills.	2.978
31.	To develop scientific attitudes, interests, and values.	2.961
32.	To understand and apply mathematical operations and concepts.	2.391
33.	To learn fundamental scientific ideas.	2.883
34.	To obtain freedom and control in physical movement.	2.848
35.	To develop a strong body.	2.843
36.	To understand how knowledge is produced in a particular discipline.	2.840
37.	To speak a second language well enough to communicate.	2.810
38.	To understand basic social science concepts.	2.778
39.	To understand and use scientific methods.	2.778
40.	To develop individual artistic skills.	2.774

41.	To read a second language with understanding.	2.774
42.	To appreciate the contribution of mathematics to progress.	2.770
43.	To understand moral and ethical problems in science.	2.744
44.	To understand social problems that are either caused, or solved through science.	2.712
45.	To develop an understanding of the people involved when studying a second language.	2.711
46.	To understand modes of inquiry and skills unique to the social sciences.	2.698
47.	To understand the role of science in societies' development.	2.692
48.	To understand the structure and use of a second language.	2.660
49.	To understand a second language when spoken at a normal speed.	2.608
50.	To develop an understanding of language arts for personal enjoyment.	2.591
51.	To appreciate the contribution of the people when studying a second language.	2.552
52.	To recognize ones' own musical abilities.	2.450
53.	To apply artistic design principles in art and everyday living.	2.374
54.	To develop an appreciation of artistic design.	2.363
55.	To appreciate style changes in the English language.	2.325
56.	To write anything one can say in a second language.	2.296
57.	To become aware of the basic importance of music in life.	2.199
58.	To develop an appreciation of music past and present.	2.073
59.	To understand ways of communicating	

through music. 1.974

60. To develop an understanding of past and present art. 1.959

61. To communicate, through drama, an awareness of the current world issues. 1.891

62. To encourage further interest in drama. ... 1.874

63. To develop sensory distinction in drama. .. 1.873

64. To develop concentration in drama. 1.811

Importance of Subject Areas

By re-grouping the 64 objectives under their subject area and computing an average of objective ratings for each subject area, we can get some indication of the importance placed on each subject area by the respondents to this questionnaire.

It is important to point out that the results of this approach must be based on the assumption that the objectives represent the emphasis of the subject area and were clearly understood by the respondents. By referring to Appendix D, the reader can identify objectives which received notably higher responses under the "don't know" column. This may be one way of identifying objectives in which the wording was not clearly understood.

Subject Areas Ranked. Industrial Education, Social Studies, Business Education, and Mathematics turn out to be rated the highest on importance according to their objectives. Lease important subject areas appear to be the Fine Arts and Modern Languages.

The overall relative ranking of the importance of the subject areas based on the average rating of their respective objectives follows:

1.	Industrial Education	3.481
2.	Social Studies	3.296
3.	Business Education	3.263
4.	Mathematics	3.258
5.	Physical Education	3.137
6.	Language Arts	2.910
7.	Science	2.832

8. Social Sciences	2.772
9. Second Languages	2.630
10. Music	2.477
11. Art	2.368
12. Drama	2.059

Relative Importance Of Objectives Within Subject Areas

The relative importance placed on individual objectives within subject areas can provide some guidance to curriculum builders within each area. Objectives may be marked lower due to their lack of clarity as well and if such were the case they should possibly be reworded.

Following is a rating of each objective within each subject area. Based on the scale used, the maximum rating would be 4.000.

1. Industrial Education (average rating 3.481)

- To develop appropriate attitudes and work habits.	3.629
- To provide practical application of academic knowledge.	3.507
- To develop basic skills to enter a job.	3.460
- To develop skills for entry into an occupation.	3.437
- To develop basic skills to enter a post high school institution.	3.370

2. Social Studies (average rating 3.296)

- To develop an awareness of values.	3.618
- To develop an ability to choose from all known alternatives.	3.574
- To defend ones' choice of alternatives.	3.436
- To take action on chosen alternatives.	3.345
- To respond to the feelings and ideas of others without compromising individual value system.	3.326
- To choose among a variety of values.	3.322
- To develop a consistent, defensible system of values based on chosen alternatives.	3.132
- To recognize information relevant to social problems.	3.017
- To use information to propose a solution to social problems.	2.994

3. Business Education (average rating 3.263)

- To develop individuality in thought and action.	3.574

- To develop problem solving abilities.	3.439
- To develop useful business knowledge and skills.	3.317
- To give practical experience in the application of business skills.	3.167
- To develop an understanding of the operation of a business.	3.140
- To apply business skills to other areas.	3.128
- To develop business skills of individual interest.	3.074

4. Mathematics (average rating 3.258)

- To develop the ability to understand and solve a problem.	3.794
- To develop precision in thought and expression.	3.357
- To understand and apply mathematical operations and concepts.	2.931
- To appreciate the contribution of mathematics to progress.	2.770

5. Physical Education (average rating 3.137)

- To develop the ability to get along well with others.	3.669
- To develop an interest in physical activities for leisure time.	3.056
- To develop recreational skills.	2.978
- To develop a strong body.	2.843

6. Language Arts (average rating 2.910)

- To develop the ability to communicate clearly in speech and writing.	3.711
- To develop a personal value system through examination of the value systems of others.	3.014
- To develop an understanding of language arts for personal enjoyment.	2.591
- To appreciate style changes in the English language	2.325

7. Science (average rating 2.832)

- To connect scientific knowledge with vocational skills and opportunities.	3.051
- To develop scientific attitudes, interests, and values.	2.961
- To learn fundamental scientific ideas.	2.883
- To understand and use scientific methods.	2.778
- To understand moral and ethical problems in science.	2.744
- To understand social problems that are either caused, or solved through science.	2.712
- To understand the role of science in societies' development.	2.692

8. Social Sciences (average rating 2.772)

- To understand how knowledge is produced in a particular discipline.	2.840
- To understand basic social science concepts.	2.778
- To understand modes of inquiry and skills unique to the social sciences.	2.698

9. Second Language (average rating 2.630)

- To speak a second language well enough to communicate.	2.810
- To read a second language with understanding.	2.774
- To develop an understanding of the people involved when studying a second language.	2.711
- To understand the structure and use of a second language.	2.660
- To understand a second language when spoken at a normal speed.	2.608
- To appreciate the contributions of the people when studying a second language.	2.552
- To write anything one can say in a second language.	2.296

10. Music (average rating 2.477)

- To increase ones' self confidence.	3.691
- To recognize ones' own musical abilities.	2.450
- To become aware of the basic importance of music in life.	2.199
- To develop an appreciation of music past and present.	2.073
- To understand ways of communicating through music.	1.974

11. Art (average rating 2.368)

- To develop individual artistic skills.	2.774
- To apply artistic design principles in art and everyday living.	2.374
- To develop an appreciation of artistic design.	2.363
- To develop an understanding of past and present art.	1.959

12. Drama (average rating 2.059)

- To obtain freedom and control in physical movement.	2.848
- To communicate, through drama, an awareness of the current world issues.	1.891
- To encourage further interest in drama.	1.874
- To develop sensory distinction in drama.	1.873
- To develop concentration in drama.	1.811

SELECTED UNSOLICITED NOTES ATTACHED TO RETURNED QUESTIONNAIRES

I feel the main goal in education should be - to develop intellectual curiosity and eagerness for lifelong learning and to develop special interests and abilities. If those two things were met I think all the rest of the educational dilemmas would be more easily met.

High school programs should be very perceptively structured and concentrate on math, science, English literature and grammar, music, art, social, FRENCH or Latin, basic nutrition (sorely missing) and physical education. Vocational high schools are more successful as a separate entity.

In short, high school must give students a real understanding of how the world develops and how to change it, as well as preparing them to live in that world.

Classes are too big to one teacher - they should be reduced, about 10-15 students.

In a society that is as affluent and fast paced as ours, a student finds it most valuable to leave school early, so as to develop the skills and obtain the experience required for survival in the working world. The school systems inability to fulfill these needs is the reason for the high failure rates in todays schools.

SUMMARY, IMPLICATIONS, CONCLUSIONS, RECOMMENDATIONS

CHAPTER NINE

SUMMARY, IMPLICATIONS, CONCLUSIONS, & RECOMMENDATIONS

The Curriculum Evaluation Project was a pilot of what could become an on-going systematic approach to gathering and organizing evaluative information about the high school curriculum from a provincial perspective.

The following chapter by chapter summary is presented in point form, commencing with Chapter Two.

CHAPTER TWO: THE SCHOOLS & INCOMING STUDENTS

Prior to considering evaluative information about provincial high school curriculum, it is important first to consider antecedent information about the schools through which the curriculum is presented to the student-client, and then some antecedent information about the student prior to enrolling in the high school.

School Characteristics

* Average school enrollment was 907, 40% of the students were from schools of fewer than 500.
* Credit offerings ranged from 100 to 1200 (average 400), with 70% of students attending schools offering fewer than 600 credits.
* On the average, students attended schools with 47 teachers.
* 71% of the students attended semestered schools, 27% - 10 month terms.
* 55% attended schools offering academic, business and vocational programs.
* Geographical areas of less than 5,000 population accounted for 45% of the sample.
* Average pupil-teacher ratio was 17 to 1, but approximately 20% attended schools with ratios higher than 20 to 1 and less than 15 to 1.
* 30% of the students attended schools with no designated counsellor.
* Shifts in school characteristics from Q1 to Q2 to Q3, tended toward the smaller, academic-business, rural, 10 month term high schools.

Student Characteristics

- * The average grade eleven student was in his/her 17th year.
- * Over 60% reported their parents' educational level at high school or lower.
- * Shifts in student characteristics from Q1 to Q2 to Q3, tended slightly toward female, higher ability, and higher achievers.

School - Student Characteristics

- * Characteristics of students attending the various school categorizations differed little.

CHAPTER THREE: COURSE SELECTION & STUDENT PROGRAMS

Results of student-client feedback on the process of course and program selection, and results of computer analyses of student records in analyzing their "programs" or their particular selection of courses were presented.

Information presented on the process of course selection focused on:
(a) what subject areas were selected and why,
(b) what difficulties were encountered in getting selections,
(c) who influenced selections,
(d) which courses were dropped and why,
(e) how, over time, students felt they would have selected differently.

Information obtained as a result of analysis of student records resulted in "groupings" of students according to similarities in their programs, in that they tended to take similar clusters of courses.

Course Selection

- * 60% of the Q1 respondents felt they had free selection of courses.
- * Business and Vocational courses were selected primarily for job preparation.
- * Fine Arts, Home Economics, Industrial Arts and Physical Education courses were selected primarily for personal interest.
- * English, Social Studies, Mathematics, Science and Second Languages were selected primarily for college or university entrance.

- Courses that were selected primarily for personal interest were the areas that students had the most difficulty in getting what they had selected.

- Highest dropout rates (10%) were in Business, Science, Second Language; lowest in English and Home Economics (3%).

- In looking back, students' later views on course selection tended toward:

  (a) an increased recognition of the need to include Business, Vocational, Physical Education and other Practical Arts courses,

  (b) seeing the "academic" courses as less important.

Student Programs

- 15 programs (the "mix" of courses taken by a student) were identified.

- Programs of a "diploma" nature held students of lower ability and achievement.

- Matriculation programs which include modern languages enrolled significantly larger proportions of females, while the math-science programs had a larger proportion of males.

- Vocational, Industrial Arts, General Diploma and Non-Diploma all enrolled higher proportions of males.

- Business and Home Economics enrolled larger proportions of females.

- Slightly over 1/2 of the students were enrolled in a matriculation program, 1/3 in general programs, 1/10 in each of Business and Vocational.

- Business programs enrolled students with the lowest ability scores - 82% below the mean T-SCAT score.

CHAPTER FOUR: CAREER PLANS & ACHIEVEMENTS

Information was gathered concerning students' career plans on the first questionnaire (Q1) and subsequent information was gathered on the achievement of these plans through student feedback via follow-up questionnaires Q2 and Q3.

The first part of this chapter dealt with career plans: what they were, who influenced the forming of career plans, and how are they were associated with the various school programs. The second part of the chapter followed up the development of the career plans showing the students' achievement in 1973 and 1977. The achievement of career plans was also shown in association with school programs and other related variables.

Student Career Plans

* While in Grade 11, 92% planned to finish high school; reasons for planning not to finish primarily included a job or dislike for school.

* In Grade 11, 46% had made a career decision, only 14% had not. By the completion of Grade 12, 55% had made a career decision and 11% had not.

* Post high school plans had the majority (57%) intending to go to university or college, 22% with plans to go directly to work.

* Parents were identified as the major source of influence regarding career plans.

* 89% of those planning to go to university were enrolled in matric programs.

Career Achievements

* One year after high school, 46% had gone directly to work (over 70% of these had planned to do so), 35% on to post-secondary programs. 58% of those planning university had gone on to some post-secondary program, but only 33% of those planning college had done so.

* Five years after high school, 78% were employed, 13% were still students, 9% were unemployed.

* 72% of those enrolled in the Business program and 54% of those enrolled in Vocational were employed by 1973 (one year after graduating).

* In 1977, the highest unemployment was reported by students who had come through the General program.

* In 1977, no Vocational or Business student was unemployed (seeking a job).

* By 1977, large urban centres had a somewhat higher proportion of students going on to post-secondary programs.

* By 1977, large urban centres had a higher proportion of their graduates unemployed, small urban centres

the lowest.

- Academic only schools had a higher proportion of their students unemployed than did academic and business or academic and business and vocational schools.

CHAPTER FIVE: EDUCATIONAL ACHIEVEMENTS

While Chapter Four reported on general career plans and achievements this chapter dealt more specifically with educational achievements. Occupational achievements follow in Chapter Six.

Educational achievements of the student-clients selected in 1971 included:

(a) high school achievements,
(b) post-high school achievements,
(c) a breakdown of achievements by various student characteristics,
(d) a breakdown of achievement according to the students' programs,
(e) a breakdown of achievement by various school attributes.

General

- By 1973 (one year after normal completion of high school) over 80% reported having completed high school, however records showed only 54% had achieved a diploma and 30% had achieved university matriculation.

- By 1977 (five years after high school) 30% reported having gone to university, 16% to college, and 13% to technical institutes. 20% reported 4 or more years of post-secondary education.

- Further educational articulation by program:

  (a) Business - 61% no further education,

  (b) Vocational - 28% to apprenticeships, 18% to technical institutes,

  (c) Matriculation - 42% to university,

  (d) General - 37% no further education.

Achievement By Student Characteristics

- 63% females and 50% males achieved a high school diploma.

- * Although higher ability ratings were associated with higher proportions of students achieving a high school diploma, 35% in the first decile of Total SCAT achieved a diploma, and only 84% from the tenth decile did so.

Achievement By Student Program

- * Completion of the high school diploma seemed closely associated with those in "core" or more in-depth programs and those with clearly identified plans for further education.

- * Lower completion rates from Vocational programs seem associated with plans for work and apprenticeships. The same was true for those in the other programs (except Business).

- * A higher proportion of those enrolled in the Matriculation program achieved a diploma than in other programs. Business was second, General lowest.

- * While only 33% of all those in the Matriculation program achieved matriculation, 70% of those in the program who reported plans to go to univeristy, achieved their matriculation.

Achievement By School Characteristics

- * More extensive school offerings (more credits) do not seem to be associated with higher proportions of graduates.

- * Small urban schools graduate slightly fewer students, and large urban schools see larger proportions achieve matriculaton.

- * Larger proportions of graduates seem associated with Academic and Business high schools and ten-month term programs.

CHAPTER SIX: OCCUPATIONAL ACHIEVEMENTS

As the second major area of post high school endeavor, occupational development was a prime area for feedback from the students involved in the longitudinal study. Information regarding occupational decisions, the attainment of employment, job status, and job satisfaction was primarily collected via the third questionnaire (Q3).

This chapter focused on the following topics:

(a) occupational status and job classifications,
(b) wage classifications,

(c) extent of mobility.

Reference was made back to such student variables as sex and ability, program variables, as well as selected school variables.

- By 1977 (five years after high school) 78.1% were employed, 5.6% unemployed and seeking jobs, 3.4% unemployed but not seeking jobs, 12.7% were still students.
- Similar male/female proportions were reported in professional and semi-professional jobs. Males were predominant in the managerial, skilled and semi-skilled categories, while more females were reported in clerical and sales.
- Business and vocational programs reported the highest degree of "relatedness" of earlier plans with that which they were doing in 1977.
- Business programs were most closely associated with clerical sales positions (45.8% of those in the program), vocational with skilled and semi-skilled (41.7% & 25%), matriculation with professional and semi-professional (12.3% & 17.5%).
- More females were reported in the lower wage bracket and a higher proportion of males in the higher brackets.
- A higher proportion of those in the vocational program were reported in the higher wage brackets than those from other programs.
- Vocational students reported a higher level of career satisfaction than did students from other programs.
- Vocational students found their first employment sooner than did students from other programs.
- 65% of the 1977 respondents still lived within 25 miles of the high school they had attended.

CHAPTER SEVEN: CLIENT EVALUATION OF CURRICULUM

Student-client feedback was collected regarding the adequacy of their high school program. Evaluative opinions were collected in six general areas:

(a) opinions regarding specific curriculum concerns at the time of the questionnaire,
(b) opinions of the adequacy of their high school program in meeting their needs in terms of the

provincial curriculum general goals,
(c) opinions of the adequacy of their high school program in meeting their needs in terms of the provincial curriculum aims for each subject area,
(d) opinions regarding the effectiveness and prevalence of various teaching methods,
(e) evaluative opinions regarding various school services,
(f) evaluative opinions regarding various extra-curricular activities.

The major focus of this part of the evaluation was on the provincial goals/aims/objectives as laid down by the Program of Studies, these being the prime source of curriculum leadership to school districts and schools.

Specific Concerns

- Work experience and special projects were evaluated highly (close to 70% of those who had participated).
- More emphasis on basics was suggested by 56%. However, more remedial help for those experiencing difficulty showed 86% agreement.
- More practical work experience was indicated by 80% and more vocational emphasis by 70%.
- Over 60% reported dissatisfaction with counselling in their school years.
- Respondents were split over the need for more emphasis on preparation for leisure time activities.

Achievement of General Goals

- On the average, 60% rated the Goals of Basic Education adequately achieved for them.
- Goal areas receiving the highest adequacy ratings were:

  (a) develop basic and special knowledge competencies 71%,

  (b) learn how to organize, analyze and use information 70%,

  (c) develop skills in communication (65%).

- Goal areas receiving the lowest adequacy ratings were:

  (a) develop management skills (44%),

(b) learn about the world of work (40%).

- Higher proportions of those from business (65%) and vocational (60%) programs rated their school experiences adequate than did those from the matriculation (56%) or general (56%).

Achievement of Subject Area Objectives

- Subject areas judged as most adequately meeting their objectives for their students included: Physical Education (76%), Mathematics (72%), Science (66%), and Industrial Education (65%).

- Subject areas judged as least adequately meeting their objectives for their students included Second Languages (41%), Drama, Art and Music (44-50%).

Effectiveness & Prevalence of Teaching Methods

- Practical activities, class discussions, individual projects were rated most effective.

- Least effective learning activities were teacher lectures, language labs, and library research.

- The most prevalent learning activity was the teacher lecture (34%).

- The higher achiever tended to rate "individual" types of learning activities more highly, the lower achiever tended to prefer more "group" learning activities.

- There appeared to be some relationship between the prevalence of the more effective teaching methods and the extent to which subject areas adequately achieved their objectives.

School Services Evaluated

- Guidance, library and cafeteria services received "good" (3 on a 5 point scale) evaluations on the average.

Extra-Curricular Activities

- Sports activities were rated good to very good, overall school spirit was rated as only "fair" on the average.

CHAPTER EIGHT: FUTURE DIRECTIONS

The final part of the evaluation project focused on student-client feedback on what *importance* should be placed on various aspects of the high school curriculum in the future. This was an attempt to identify "intended outcomes" for comparison in future evaluations and to give some direction to current curriculum planning and resource allocation.

In the first and second questionnaires (Q1 and Q2), only three general questions were asked, seeking importance ratings on selected curriculum goals. The third questionnaire however included a broader approach which identified ratings of importance of each of the subject area objectives and rankings of the goals of secondary education based on importance.

Selected Goal Ratings

* The development of occupational skills, and provision of information for occupational choice were rated very important.

Importance Of General Goals

* In rating the importance of goals, "skill" goals were rated higher than "knowledge" or "attitudinal" goals, and the development of the individual was rated more important than social goals.

* Learning skills, communication skills and management skills are amongst the objectives ranked most important.

* Of the 12 Goals of Basic Education, the three rated most important were:

  (a) develop a desire for learning (97%-ile),

  (b) develop skills in communication (84%-ile),

  (c) develop management skills (81%-ile).

* Lowest importance was attributed to:

  (a) appreciate culture and beauty in the world (2%-ile),

  (b) learn to be a good citizen (20%-ile),

  (c) practice and understand the ideas of health, fitness and safety (21%-ile).

Importance Of Subject Area Objectives

* Rating of Subject area objectives showed similar

emphasis to the ratings of general goals as the highest subject area objectives were:

(a) to develop the ability to understand and solve a problem,

(b) to develop the ability to communicate clearly in speech and writing,

(c) to increase ones' self-confidence,

(d) to develop the ability to get along well with others,

(e) to develop appropriate attitudes and work habits.

* Lowest subject area objectives were from the fine arts and second languages area.

Importance Of Subject Areas

* An overall ranking of subject areas based on the average importance of their objectives showed industrial education, social studies, business education as the highest on importance.

* Fine arts and second languages were rated as lowest in importance.

Importance Of Objectives Within A Subject Area

* For exemplary purposes the most important and least important objectives of subject areas follow:

(a) Industrial Education
most: to develop appropriate attitudes and work habits,
least: to develop basic skills to enter a post high school institution;

(b) Social Studies
most: to develop an awareness of values,
least: to use information to propose a solution to social problems;

(c) Business Education
most: to develop individuality in thought and action,
least: to develop business skills of individual interest;

(d) Mathematics
most: to develop the ability to understand and solve a problem,

least: to appreciate the contribution of math to progress;

(e) Physical Education
most: to develop the ability to get along with others,
least: to develop a strong body;

(f) Language Arts
most: to develop the ability to communicate clearly in speech and writing,
least: to appreciate style changes in the English language;

(g) Science
most: to connect scientific knowledge with vocational skills and opportunities,
least: to understand the role of science in societies' development;

(h) Second Language
most: to speak a second language well enough to communicate,
least: to write anything one can say in a second language;

(i) Music
most: to increase ones' self confidence,
least: to understand ways of communicating through music;

(j) Art
most: to develop individual artistic skills,
least: to develop an understanding of post and present art;

(k) Drama
most: to obtain freedom and control in physical movement,
least: to develop concentration in drama.

IMPLICATIONS OF THE FINDINGS

Since the design of the project was the pilot of a longitudinal study rather tnan one of experimental research, it was primarily descriptive in nature. The significance of any particular piece of information must be considered within the whole, and would increase in significance as similar information became available for subsequent but similar groups of students.

Nevertheless, the implications of the findings should be considered and in the light of other information may lend support to further action. Some of these implications are discussed briefly.

In-depth Evaluation of Subject Areas

- Achievement ratings of subject area objectives indicate a need for in-depth evaluation of the Modern Languages curriculum and the Fine Art curriculum.
- Subject area dropout rates (and their causes) in Business Education, Science, and Second Languages require study.

Detailed Study Regarding Teaching Methods

- Student-client feedback indicates the need for a close evaluation of the effectiveness of the Language Laboratory and Library Research at the high school level.
- Further research needs to be conducted to determine if, indeed, the teaching methods most often used in our schools are biased toward the "good student". Ways should be explored to implement more practical group oriented modes of learning especially in courses directed toward the slower learner.

Student Program Selection

- Steps should be taken, possibly through Diploma requirements, to encourage students to enroll in programs with an in-depth "core" of courses from Business, Vocational, or other practical arts subject areas.
- Program advisors should encourage the student to formulate career and occupational goals, as success in high school seems associated with holding such personal goals.
- Closer alignment between career goals and the high school program selected should be encouraged as this also seems to be associated with high school completion rates, even where "ability" ratings would suggest different programs.

Further Evaluation Of Specific School Services

- The counselling services in Alberta high schools seem to be in need of further evaluation, development and stimulation through provision of resources.
- Extra-curricular programs other than sports are in need of development and improvement.

General Changes In Curriculum Emphasis And Development

- Steps should be taken toward the provision of more and better practical work experiences, development of individual management skills, and preparation for the world of work.
- Curriculum committees need to re-evaluate the verbalizations of their objectives with regard to their appropriateness and/or clarity.
- Developmental studies need to be undertaken to ensure that all general goals are reflected somewhere in the range of subject-area or extra-curricular objectives.
- Recent emphasis on a "return to the basics" gets only moderate support, as did preparation for leisure time activities.
- More relevance in academic courses is needed.

Continued Support For Vocational And Business Education

- Attitudinal responses, achievement and articulation data, as well as career development information emphasize the individual and social return for educational dollars spent within the Vocational and Business programs.

The Type Of Term

- Further evaluation of the advantages and disadvantages of semestering is indicated, especially the tri-mester term.

CONCLUSIONS

Until recently, the education system has done relatively little toward systematically gathering information that would give overall indications of the effectiveness of our education system and indications of general areas of strengths and weaknesses. We have an urgent need for such an approach, not only to aid in the competition with other government departments for resources, but to provide the basis for greater improvement of schooling.

This pilot study emphasized the need for information gathered from the student-client of our schools. It has shown how this information could be related directly to provincial curriculum goals and objectives. It also has shown how information gathered could be organized according to a systems model in order to provide clearer indications of effectiveness.

The use of the model chosen also showed the need for other types and sources of information. There is an obvious need for information gathered from other important participants in the system such as teachers, administrators and parents. Standardized achievement scores also provide necessary bench marks, along with the systematic and comparative observations of skilled on-site evaluators. A model suitable for the evaluation of on-going programs at a general provincial level also points to the need for an alignment of other information such as costs related to administration and programs.

This pilot study showed many problem areas and needs for refinement. It also showed the need for greater clarity in goal and objective statements if they are to be used as a basis for evaluative feedback from those who have experienced our school curriculum.

Some Further Applications

A few additional approaches (beyond the scope of this project) started to show up as possibilities as the project drew to a close. Brief references to these follow.

Individual School Districts And/Or Schools. If such provincial information was gathered on an on-going basis, to establish (normative expectations) standards as the model suggests, information from large schools or districts could then be isolated and compared with provincial norms. The use of Bayesian statistics would provide the tool for establishing both the standards and the comparisons.

Comparison of Importance and Adequacy Ratings. All goals and objectives, even those of least importance, should be "adequately" achieved. The areas of most concern however, may be those areas where we have the most discrepency, i.e. high importance and low achievement or low importance and high achievement. An example from the general goal statements would be the fact that the goal "Develop management skills" is third highest on importance, but second lowest on the adequacy rankings.

Specific examples from the sub-goals are:

1. Of those sub-goals in the top third on importance , two are rated in the bottom third on achievement , namely the sub-goal dealing with management of resources (Imp.-5th, Achiev.-34th), and the sub-goal dealing with developing skills basic to the world of work (Imp.-11th, Achiev.-30th).

2. Of those sub-goals in the top third on achievement, four are in the bottom third on importance;
   (a) organizing information into categories (Achiev.-

3rd, Imp.-25th),

(b) develop a fund of information and concepts (Achiev.-5th, Imp.-31st),

(c) apply scientific methods (Achiev.-8th, Imp.-27th),

(d) establish sound personal health habits (Achiev.-9th, Imp.-33rd).

General Goals Reflected in Subject Area Objectives. An examination of the relationship of the sub-goals and the more specific subject area objectives indicates that some sub-goals are more clearly reflected in subject area objectives than others.

As an example, the third, fourth and fifth most important sub-goals (develop intellectual curiosity and eagerness for lifelong learning, develop a positive attitude toward learning, develop skills in managing natural, financial and human resources) are not clearly reflected in any of the subject area objectives. Where then would learning toward these goals take place?

We find that these sub-goals, possibly because they are not reflected in subject area objectives, are evaluated very low on achievement ratings.

Use of Interaction Detection Approaches. The existence of an information base as suggested would provide the opportunity for "model-searching" as well as model-testing types of research.

For example, the application of the Interaction Detection Approach, advanced by Sonquist[1], would provide the explanation of high school diploma achievement as shown in Figure 38.

The figure shows that the variance within the sample on the dependent variable selected (in this case, level of high school attainment) can be explained best by three of the independent variables used. Independent variables used included: sex, V-SCAT, Q-SCAT, departmental averages, 15-way program, school enrollment, school type, school region, school term type, and pupil-teacher ratio. Of the three independent variables with the most explanatory power, the "program" (of the 15 programs offered) followed by the student in his/her grade eleven year, has the greatest explanatory power with regard to the level of credits that students may be expected to achieve. Using the combined explanatory power of all three variables, 54% of the

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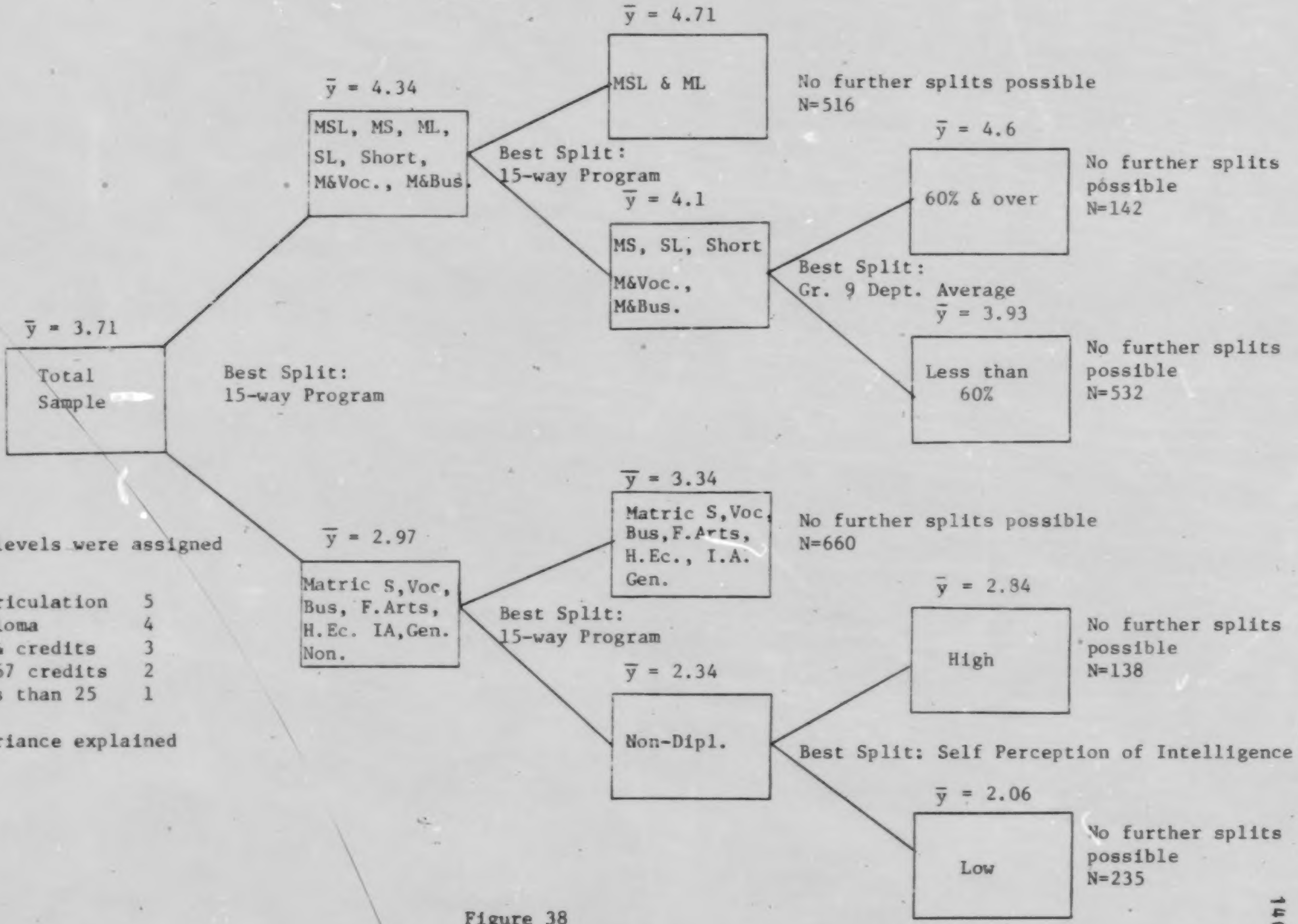
[1] Sonquist, J. et. al., Searching For Structure. Ann Arbor: Institute for Social Research, 1973.

INDEPENDENT VARIABLES WHICH EXPLAIN THE MOST VARIATION IN THE DEPENDENT VARIABLE: LEVEL OF HIGH SCHOOL ATTAINMENT*


$\bar{y}$ = 3.71
Total Sample
Best Split: 15-way Program
$\bar{y}$ = 4.34
MSL, MS, ML, SL, Short, M&Voc., M&Bus.
Best Split: 15-way Program
$\bar{y}$ = 4.71
MSL & ML
No further splits possible N=516
$\bar{y}$ = 4.1
MS, SL, Short M&Voc., M&Bus.
Best Split: Gr. 9 Dept. Average
$\bar{y}$ = 4.6
60% & over
No further splits possible N=142
$\bar{y}$ = 3.93
Less than 60%
No further splits possible N=532
$\bar{y}$ = 2.97
Matric S,Voc, Bus, F.Arts, H.Ec. IA,Gen. Non.
Best Split: 15-way Program
$\bar{y}$ = 3.34
Matric S,Voc, Bus,F.Arts, H.Ec., I.A. Gen.
No further splits possible N=660
$\bar{y}$ = 2.34
Non-Dipl.
Best Split: Self Perception of Intelligence
$\bar{y}$ = 2.84
High
No further splits possible N=138
$\bar{y}$ = 2.06
Low
No further splits possible N=235

*Credit levels were assigned values:

(a)	Matriculation	5
(b)	Diploma	4
(c)	67 & credits	3
(d)	25-67 credits	2
(e)	less than 25	1

54.2% variance explained

Figure 38

variance is explained.

These findings also serve as indicators of the usefulness of the particular approach in this study of focusing on the program of the student-client, when program is defined as the particular cluster of courses experienced.

Other dependent variables such as high school average, years of education since high school, wage bracket, or employment type, could be used. Similarily, independent variables could be dropped or added in order to improve the explanatory power.

RECOMMENDATIONS

An evaluative approach should provide comparative information on sub-systems within the total system, and provide for the systematic development of standards for comparison by decision makers. This report has provided an example of such an approach. Specific judgements of effectiveness and or value is left to the appropriate decision makers. Such monitoring would serve the educational system by providing an educational "audit" which would:

1. Provide indications of program effectiveness and subject area curriculum effectiveness and identify areas in need of more in-depth evaluation.

2. Give guidance to curriculum planners and resource allocators regarding future curriculum directions and emphasis.

The potential for the establishment of an on-going evaluation system, based on further development of the approach used in this pilot project has been demonstrated. Hence the following recommendations are made:

1. More detailed evaluations be undertaken in those areas indicated in the section on implications.

2. Greater developmental efforts and appropriate resources be directed toward those areas identified in the study as requiring more emphasis.

3. An on-going program of evaluation be established at the provincial level along the lines indicated in this study.

4. An on-going program of achievement testing be established at the provincial level, as one input of information into a total program of evaluation.

APPENDIX "A"

STUDENT RELATED VARIABLES

1. FROM DEPARTMENT FILES
2. GENERATED FROM INFORMATION ON DEPARTMENT FILES
3. FROM "A" CARD RECORDS

VARIABLES FROM DEPARTMENT FILES

Variable 1 - Sex.

Variable 2 - Grade 9 Verbal SCAT score.

Variable 3 - Grade 9 Quantitative SCAT score.

Variable 4 - Grade 9 Total SCAT score.

VARIABLES GENERATED FROM INFORMATION ON DEPARTMENT FILES

Variable 5 - Average of Grade 9 Departmental examination scores.

Variable 6 - Categorization of students according to level of high school attainments. (a) Matriculation, (b) diploma, (c) 67 or more credits but less than Diploma, (d) 25 to 67 credits, (e) less than 25 credits.

Variable 7 - Categorization of students according to 4-way program, based on Grade XI course enrollments.

Variable 8 - Categoriztion o students according to 15-way program, based on Grade XI course enrollments.

Variable 9 - Average all Grade 10 course marks.

Variable 10 - Average of all high school course marks.

VARIABLES FROM "A" CARD RECORDS

Variable 11 - Category of school attended, according to the total number of credits offered.

Variable 12 - Category of school attended, according to the total enrollment.

Variable 13 - Category of school attended, according to the number of full time teachers teaching high school subjects.

Variable 14 - Category of school attended, according to the type of course offerings.

Variable 15 - Category of school attended, according to the regions.

Variable 16 - Computed Pupil-Teacher ratios.

Variable 17 - Category of School attended, according to the number of designated counsellors.

Variable 18 - Category of School attended, according to the type of term offered.

APPENDIX "B"

INITIAL STUDENT QUESTIONNAIRE (Q1) & RESPONSES

(1971)

DEPARTMENT OF EDUCATION

CURRICULUM EVALUATION STUDENT QUESTIONNAIRE

Circle or check one or more items to indicate your response for each question.

		No.	%
1.	How old are you?		
	a. 15 or less	51	2.29
	b. 16	998	44.85
	c. 17	973	43.75
	d. 18	168	7.55
	e. 19	30	1.37
	f. 20 or more	1	.04
2.	What is your sex?		
	a. Male	1106	
	b. Female	1116	
3.	What is the last school your father attended? (Check one)		
	a. Jr. high school	728	32.71
	b. High school	635	28.53
	c. Institute or college (Business or Nursing school)	182	8.17
	d. University	230	10.33
	e. Don't know	419	18.83
4.	What is the last school your mother attended? (Check one)		
	a. Jr. high school	561	25.21
	b. High school	876	39.37
	c. Institute or college (Business or Nursing school)	300	13.48
	d. University	142	6.38
	e. Don't know	333	14.96
5.	In your own estimation, how smart are you in relation to students of your own age? (Check one)		

a. Superior	47	2.11
b. Slightly superior	435	19.55
c. Average	1609	72.31
d. Slightly inferior	118	5.3
e. Inferior	9	.4

6. For the courses you are taking (or completed) in the current school year, how many were you able to choose?

	No.	%
a. Chose all courses	1336	60.04
b. Chose some courses the rest were assigned	846	38.02
c. All courses were assigned	31	1.39

Questions 7 through 14 ask you to supply information about course patterns (courses which have been grouped into 11 broad areas). These questions will trace your patterns (for the current school year only) from the time of request (preregistration) to the actual enrolment, dropping or completion, and evaluation. Since the questions are highly interrelated, please answer them carefully.

7. Mark the course pattern(s) which you requested (preregistered in).

	No.	%
A. Business Education	775	34.83
B. Technical or Vocational education	331	14.87
C. English	2067	92.89
D. Fine Arts	415	18.65
E. Social Studies	1872	84.13
F. Home Economics	363	16.31
G. Mathematics	1845	82.92
H. Industrial Arts	297	13.34
I. Science	1677	75.37
J. Physical Education	868	39.01
K. Modern Languages	897	40.40

8. For only those course patterns you requested in item

number 7, indicate the best reason for its selection. Check ONE answer for each subject area.

	No.	%
A. Business Education (total)	778	
Credit Only	142	18.3
Personal Interest	211	27.1
Job Preparation	403	51.8
College or University Entrance	16	2.1
Leisure or Recreation	6	0.8
B. Technical or Vocational education (total)	345	
Credit only	25	7.2
Personal Interest	113	32.8
Job Preparation	180	52.2
College or University Entrance	20	5.8
Leisure or Recreation	7	2.0
C. English (total)	2069	
Credit only	492	23.8
Personal Interest	238	11.5
Job Preparation	257	12.4
College or University Entrance	1072	51.8
Leisure or Recreation	10	0.5
D. Fine Arts (total)	441	
Credit only	49	11.1
Personal Interest	260	59.0
Job Preparation	27	6.1
College or University Entrance	36	8.2
Leisure or Recreation	69	15.6
E. Social Studies (total)	1865	
Credit only	557	29.9
Personal Interest	350	18.8
Job Preparation	133	7.1
College or University Entrance	823	44.1
Leisure or Recreation	2	0.1
F. Home Economics (total)	382	
Credit only	52	13.6
Personal Interest	247	64.7
Job Preparation	23	6.0
College or University Entrance	19	5.0
Leisure or Recreation	41	10.7

G. Mathematics (total)	1840	
Credit only	363	19.7
Personal Interest	177	9.6
Job Preparation	337	18.3
College or University Entrance	959	52.1
Leisure or Recreation	4	0.2
H. Industrial Arts (total)	323	
Credit only	49	15.2
Personal Interest	176	54.5
Job Preparation	53	16.4
College or University Entrance	14	4.3
Leisure or Recreation	31	9.6
I. Science (total)	1674	
Credit only	274	16.4
Personal Interest	250	14.9
Job Preparation	230	13.7
College or University Entrance	914	54.6
Leisure or Recreation	6	0.4
J. Physical Education (total)	870	
Credit only	132	15.2
Personal Interest	345	39.7
Job Preparation	29	3.3
College or University Entrance	42	4.8
Leisure or Recreation	322	37.0
K. Modern Languages (total)	901	
Credit only	169	18.8
Personal Interest	286	31.7
Job Preparation	54	6.0
College or University Entrance	373	41.4
Leisure or Recreation	19	2.1

9. If you were unable to enrol in (take) one or more courses from the course patterns you requested in item number 7, indicate the course pattern(s) in which this occurred.

	No.	%
A. Business Education	162	7.28
B. Technical or Vocational Education	175	7.86
C. English	49	2.20
D. Fine Arts	204	9.16

E. Social Studies	78	3.50
F. Home Economics	189	8.49
G. Mathematics	90	4.04
H. Industrial Arts	188	8.44
I. Science	91	4.08
J. Physical Education	272	12.22
K. Modern Languages	135	6.06

10. For those course patterns which you marked in item number 9, indicate the main reason why you did not enrol in the course(s).

	No.	%
A. Business Education (total)	209	
Course not offered	42	20.1
Course had more credits than I could schedule	15	7.2
Couldn't Timetable	84	40.2
My Marks Too Low	10	4.8
Other	58	27.8
B. Technical or Vocational Education (total)	212	
Course not offered	113	53.3
Course had more credits than I could schedule	14	6.6
Couldn't Timetable	30	14.2
My Marks Too Low	5	2.4
Other	50	23.6
C. English (total)	38	
Course not offered	5	13.2
Course had more credits than I could schedule	2	5.3
Couldn't Timetable	9	23.7
My Marks Too Low	10	26.3
Other	12	31.6
D. Fine Arts (total)	248	
Course not offered	79	31.9
Course had more credits than I could schedule	20	8.1
Couldn't Timetable	96	38.7

My Marks Too Low	4	1.6
Other	49	19.8
E. Social Studies (total)	75	
Course not offered	7	9.3
Course had more credits than I could schedule	2	2.7
Couldn't Timetable	37	49.3
My Marks Too Low	12	16.0
Other	17	22.7
F. Home Economics (total)	237	
Course not offered	66	27.8
Course had more credits than I could schedule	10	4.2
Couldn't Timetable	82	34.6
My Marks Too Low	3	1.3
Other	76	32.1
G. Mathematics (total)	92	
Course not offered	6	6.5
Course had more credits than I could schedule	4	4.3
Couldn't Timetable	26	28.3
My Marks Too Low	36	39.1
Other	20	21.7
H. Industrial Arts (total)	231	
Course not offered	83	35.9
Course had more credits than I could schedule	12	5.2
Couldn't Timetable	74	32.0
My Marks Too Low	5	2.2
Other	57	24.7
I. Science (total)	94	
Course not offered	11	11.7
Course had more credits than I could schedule	6	6.4
Couldn't Timetable	27	28.7
My Marks Too Low	22	23.4
Other	28	29.8
J. Physical Education (total)	301	
Course not offered	71	23.6
Course had more credits than I could schedule	20	6.6
Couldn't Timetable	152	50.5

My Marks Too Low	12	4.0
Other	46	15.3
K. Modern Languages (total)	184	
Course not offered	31	16.8
Course had more credits than I could schedule	6	3.3
Couldn't Timetable	53	28.8
My Marks Too Low	31	16.8
Other	63	34.2

11. For each course pattern marked in question 7, indicate who influenced you the __most__ in making that choice.

	No.	%
A. Business Education (total)	749	
Parents	208	27.8
Teacher	80	10.7
Guidance Counsellor	107	14.3
Friends	85	11.3
Other	269	35.9
B. Technical or Vocational Education (total)	326	
Parents	59	18.1
Teacher	19	5.8
Guidance Counsellor	41	12.6
Friends	40	12.3
Other	167	51.2
C. English (total)	1988	
Parents	257	12.9
Teacher	526	26.5
Guidance Counsellor	402	20.2
Friends	72	3.6
Other	731	36.8
D. Fine Arts (total)	403	
Parents	49	12.2
Teacher	43	10.7
Guidance Counsellor	21	5.2
Friends	90	22.3
Other	201	49.6
E. Social Studies (total)	1802	
Parents	241	13.4
Teacher	399	22.1

Guidance Counsellor	345	19.1
Friends	90	5.0
Other	727	40.3
F. Home Economics (total)	357	
Parents	78	21.8
Teacher	16	4.5
Guidance Counsellor	14	3.9
Friends	80	22.4
Other	169	47.3
G. Mathematics (total)	1782	
Parents	352	19.8
Teacher	381	21.4
Guidance Counsellor	365	20.5
Friends	60	3.4
Other	624	35.0
H. Industrial Arts (total)	302	
Parents	41	3.6
Teacher	25	8.3
Guidance Counsellor	14	4.6
Friends	74	24.5
Other	148	49.0
I. Science (total)	1619	
Parents	265	16.4
Teacher	312	19.3
Guidance Coundellor	350	21.6
Friends	75	4.6
Other	617	38.1
J. Physical Education (total)	827	
Parents	58	7.0
Teacher	88	10.6
Guidance Counsellor	54	6.5
Friends	199	24.1
Other	428	51.8
K. Modern Languages (total)	863	
Parents	257	29.8
Teacher	116	13.4
Guidance Counsellor	129	14.9
Friends	55	6.4
Other	306	35.5

12. Answer this question only if you dropped one or more courses. For those course patterns in which you

enrolled (took or are taking one or more courses), indicate the main reason for dropping the course(s).

	No.	%
A. Business Education (total)	104	
Too Difficult	40	38.5
Too Easy	16	15.4
Course Load Too Heavy	41	39.4
I was Suspended from Class	7	6.7
B. Technical or Vocational Education (total)	25	
Too Difficult	7	2[illegible].0
Too Easy	6	24.0
Course Load Too Heavy	8	32.0
I was Suspended from Class	4	16.0
C. English (total)	59	
Too Difficult	14	23.7
Too Easy	8	13.6
Course Load Too Heavy	19	32.2
I was Suspended from Class	18	30.5
D. Fine Arts (total)	20	
Too Difficult	6	30.0
Too Easy	5	25.0
Course Load Too Heavy	7	35.0
I was Suspended from Class	2	10.0
E. Social Studies (total)	68	
Too Difficult	15	22.1
Too Easy	10	14.7
Course Load Too Heavy	32	47.1
I was Suspended from Class	11	16.2
F. Home Economics (total)	11	
Too Difficult	2	18.2
Too Easy	3	27.3
Course Load Too Heavy	6	54.5
I was Suspended from Class	-	-
G. Mathematics (total)	125	
Too Difficult	79	62.4
Too Easy	3	2.4
Course Load Too Heavy	36	28.8
I was Suspended from Class	8	6.4

H. Industrial Arts (total)	15	
Too Difficult	3	20.0
Too Easy	4	26.7
Course Load Too Heavy	3	20.0
I was Suspended from Class	5	33.3
I. Science (total)	195	
Too Difficult	117	60.0
Too Easy	7	3.6
Course Load Too Heavy	59	30.3
I was Suspended from Class	12	6.2
J. Physical Education (total)	46	
Too Difficult	8	17.4
Too Easy	6	13.0
Course Load Too Heavy	26	56.5
I was Suspended from Class	6	13.0
K. Modern Languages (total)	96	
Too Difficult	61	63.5
Too Easy	3	3.1
Course Load Too Heavy	31	32.3
I was Suspended from Class	1	1.0

13. For each course pattern in which you have taken courses, indicate the extent to which you feel it contributes to your understanding of the types of occupational activities you want to do after you leave school.

	No.	%
A. Business Education (total)	784	
Very Well	324	41.3
Well	207	26.4
A Little	188	24.0
Not at all	65	8.3
B. Technical or Vocational Education (total)	334	
Very Well	175	52.4
Well	86	25.7
A Little	49	14.7
Not at all	24	7.2
C. English (total)	2092	
Very Well	482	23.0

Well	684	32.7
A Little	649	31.0
Not at all	277	13.2
D. Fine Arts (total)	421	
Very Well	99	23.5
Well	98	23.3
A Little	123	29.0
Not at all	103	24.2
E. Social Studies (total)	1902	
Very Well	244	12.8
Well	461	24.2
A Little	739	38.9
Not at all	458	24.1
F. Home Economics (total)	383	
Very Well	87	22.7
Well	109	28.5
A Little	94	24.5
Not at all	93	24.3
G. Mathematics (total)	1874	
Very Well	517	27.6
Well	604	32.2
A Little	481	25.7
Not at all	272	14.5
H. Industrial Arts (total)	312	
Very Well	91	29.2
Well	91	29.2
A Little	79	25.3
Not at all	51	16.3
I. Science (total)	1704	
Very Well	547	32.1
Well	488	28.6
A Little	446	26.2
Not at all	223	13.1
J. Physical Education (total)	873	
Very Well	175	20.0
Well	167	19.1
A Little	250	28.6
Not at all	281	32.2
K. Modern Languages (total)	899	

Very Well	166	18.5
Well	203	22.6
A Little	301	33.5
Not at all	229	25.5

14. For each course pattern in which you have taken courses, indicate the extent to which you feel it contributes to your preparation for leisure time activities. Check ONE answer only per course pattern.

	No.	%
A. Business Education (total)	763	
Very Well	63	8.3
Well	127	16.6
A Little	275	36.0
Not at all	298	39.1
B. Technical or Vocational Education (total)	328	
Very Well	92	28.0
Well	84	25.6
A Little	94	28.7
Not at all	58	17.7
C. English (total)	2055	
Very Well	371	18.1
Well	569	27.6
A Little	671	32.7
Not at all	445	21.6
D. Fine Arts (total)	410	
Very Well	230	56.1
Well	86	21.0
A Little	61	14.9
Not at all	33	8.0
E. Social Studies (total)	186[illegible]	
Very Well	122	6.5
Well	327	17.5
A Little	711	38.1
Not at all	706	37.8
F. Home Economics (total)	384	
Very Well	196	51.0
Well	109	28.4
A Little	52	13.5
Not at all	27	7.0

G. Mathematics (total)	1824	
Very Well	76	4.2
Well	193	10.6
A Little	590	32.3
Not at all	965	52.9
H. Industrial Arts (total)	302	
Very Well	110	36.4
Well	95	31.5
A Little	61	20.2
Not at all	36	11.9
I. Science (total)	1666	
Very Well	121	7.3
Well	279	16.7
A Little	666	40.0
Not at all	600	36.0
J. Physical Education (total)	884	
Very Well	519	58.7
Well	212	24.0
A Little	95	10.7
Not at all	58	6.6
K. Modern Languages (total)	886	
Very Well	108	12.2
Well	183	20.7
A Little	310	35.0
Not at all	285	32.2

15. If you could start grade eleven, all over again, which courses would you now register in?

	No.	%
A. Business Education	767	34.47
B. Technical or Vocational Education	475	21.34
C. English	1897	85.25
D. Fine Arts	663	29.79
E. Social Studies	1634	73.43
F. Home Economics	549	24.67
G. Mathematics	1669	75.01

H. Industrial Arts	479	21.52
I. Science	1563	70.24
J. Physical Education	1100	49.43
K. Modern Languages	879	39.50

16. For each course pattern from which you have taken courses, in high school, indicate by placing a check mark in the appropriate block the activity or teaching method which was used most often by your teacher. Check one answer only for each course pattern.

	No.	%
A. Business Education (total)	762	
Teacher Lecture	148	19.3
Teacher Demonstration	114	15.0
Class Discussions	26	3.4
Small Group Discussions	7	0.9
Individual Projects)		
Small or Group Projects)	219	28.6
Library Research	1	0.1
Laboratory Experiments	1	0.1
Language Laboratory	-	-
Practical Activities	249	32.5
B. Technical or Vocational Education (total)	314	
Teacher Lecture	69	22.0
Teacher Demonstration	35	11.1
Class Discussions	17	5.4
Small Group Discussion	7	2.2
Individual Projects	91	29.0
Library Research	1	0.3
Laboratory Experiments	9	2.9
Language Laboratory	-	
Practical Activities	85	27.1
C. English (total)	2113	
Teacher Lecture	790	37.3
Teacher Demonstration	64	3.0
Class Discussions	635	30.0
Small Group Discussion	103	4.9
Individual Projects	421	20.0
Library Research	22	1.0
Laboratory Experiments	2	0.1
Language Laboratory	3	0.1
Practical Activities	74	3.5

D. Fine Arts (total)	401	
Teacher Lecture	22	5.5
Teacher Demonstration	26	6.5
Class Discussions	15	3.7
Small Group Discussions	10	2.2
Class or Group Projects	236	58.6
Library Research	2	0.5
Laboratory Experiments	2	0.5
Language Laboratory	-	-
Practical Activities	90	22.4
E. Social Studies (total)	1922	
Teacher Lecture	966	50.4
Teacher Demonstration	40	2.1
Class Discussions	347	18.0
Small Group Discussions	104	5.4
Class or Group Projects)	343	17.8
Individual Projects)		
Library Research	98	5.0
Laboratory Experiments	1	0.1
Language Laboratory	-	-
Practical Activities	23	1.2
F. Home Economics (total)	370	
Teacher Lecture	33	8.9
Teacher Demonstration	56	15.1
Class Discussions	4	1.1
Small Group Discussions	3	0.8
Class Group Discussions)	192	51.9
Individual Projects)		
Library Research	-	-
Laboratory Experiments	4	1.1
Language Laboratory	-	-
Practical Activities	78	21.1
G. Mathematics (total)	1887	
Teacher Lecture	737	39.0
Teacher Demonstration	792	41.9
Class Discussions	30	1.6
Small Group Discussions	15	0.8
Individual Projects	162	8.6
Library Research	-	-
Laboratory Experiments	1	0.1
Language Laboratory	1	0.1
Practical Activities	150	8.1
H. Industrial Arts (total)	301	
Teacher Lecture	26	8.6
Teacher Demonstration	45	15.0

Class Discussions	1	0.3
Small Groups Discussions	3	1.0
Individual Groups	163	54.2
Library Research	-	-
Laboratory Experiments	7	2.3
Language Laboratory	-	-
Practical Activities	56	18.6
I. Science (total)	1715	
Teacher Lecture	844	49.3
Teacher Demonstration	303	17.6
Class Discussions	51	3.0
Small Group Discussions	12	0.7
Individual Groups	190	11.1
Library Research	6	0.3
Laboratory Experiments	254	14.8
Language Laboratory	5	0.3
Practical Activities	50	2.9
J. Physical Education (total)	854	
Teacher Lecture	26	3.0
Teacher Demonstration	150	17.6
Class Discussions	8	0.9
Small Group Discussions	3	0.4
Individual Projects	144	16.9
Library Research	2	0.2
Laboratory Experiments	1	0.1
Language Laboratory	1	0.1
Practical Activities	520	60.8
K. Modern Languages (total)	882	
Teacher Lecture	300	33.9
Teacher Demonstration	179	20.2
Class Discussions	97	11.0
Small Group Discussions	15	1.7
Individual Projects	40	4.5
Library Research	-	-
Laboratory Experiments	5	0.6
Language Laboratory	181	20.4
Practical Activities	68	7.7

Check ONE answer only.

17. Do you plan to finish Grade 12?

a. Yes.	2037	91.7
b. No	57	2.6
c. Undecided	127	5.7

18. If you plan to leave school before completing Grade 12, why?

a. To get a job	220	54.9
b. Poor marks	32	8.0
c. To get married	43	8.5
d. Financial problems	25	6.2
e. Dislike for school work	90	22.4

19. After you leave high school, where do you plan to go?

a. University	690	31.3
b. College or Institute	587	26.4
c. Work	354	16.0
d. Apprenticeship	135	6.1
e. Don't know	265	11.9
f. Other	184	8.3

20. Who other than yourself has influenced you the most in making that decision?

a. Parents	790	37.3
b. Relatives	91	4.3
c. Teacher	63	2.9
d. Guidance Counsellor	102	4.8
e. Friend	190	8.9
f. Other	881	41.7

21. How far do your parents want you to go in high school?

a. Finish	2121	95.9
b. Leave before finishing	12	0.5
c. Don't know	80	3.6

22. Where do your parents want you to go after you leave high school?

a. University	880	40.0
b. College or Institute	526	24.0
c. Work	253	11.5
d. Apprenticeship	84	3.8
e. Don't know	451	20.7

23. Does your school have a guidance counsellor (teacher advisor)?

a. Yes	1983	89.4
b. No	197	8.9
c. Don't know	38	1.7

24. Which of these people would you ask for help in deciding on a career?

a. Friends	164	7.6
b. Teacher	157	7.1

c. Parents	512	23.2
d. Guidance counsellor	1042	47.0
e. Principal	81	3.7
f. Other	255	11.5

25. How important is it that the school provide information to help you make an occupational choice?

a. Very important	1264	57.0
b. Important	759	34.4
c. Not important	190	8.6

26. How important is it that the scool prepare you for future leisure-time activities?

a. Very important	433	19.5
b. Important	1063	48.2
c. Not important	713	32.3

27. How important is it that the school prepare you with occupational skills?

a. Very important	1333	60.1
b. Important	748	34.0
c. Not important	131	5.9

28. Have you decided on a career?

a. Yes	1013	45.6
b. No	315	14.3
c. Not definitely	890	40.1

29. Are you a member of any teams, clubs or organizations in the school?

a. No	1127	51.0
b. Yes, an officer	128	5.9
c. Yes a very active member	551	24.9
d. Yes, a not very active member	404	18.3

30. Are you a member of any teams, clubs or organizations outside of school?

a. No	948	42.9
b. Yes, an officer	256	11.6
c. Yes, a very active member	738	33.4
d. Yes, a not very active member	269	12.2

31. Please evaluate each of the following learning activities in terms of how well they help you to learn. Check one rating for each activity.

	No.	%
A. Teacher Lectures		
Excellent	91	4.1
Very good	335	15.2
Good	751	34.0
Fairly Good	600	27.3
Poor	427	19.4
B. Teacher demonstration		
Excellent	353	16.1
Very Good	730	33.3
Good	775	35.3
Fairly Good	285	13.0
Poor	50	2.3
C. Class Discussions		
Excellent	422	19.1
Very Good	710	32.3
Good	711	32.2
Fairly Good	283	12.8
Poor	81	3.7
D. Small Group Discussion		
Excellent	249	11.2
Very Good	547	25.0
Good	663	30.2
Fairly Good	488	22.2
Poor	251	11.4
E. Individual Projects		
Excellent	480	21.9
Very Good	628	28.5
Good	663	30.0
Fairly Good	321	14.6
Poor	110	5.0
F. Class or Group Projects		
Excellent	227	10.4
Very Good	592	26.8
Good	807	36.6
Fairly Good	421	19.0
Poor	159	7.2
G. Library Research		
Excellent	194	8.8
Very Good	428	19.5

Good	750	34.2
Fairly Good	553	25.1
Poor	270	12.4

H. Laboratory Experiments

Excellent	491	22.6
Very Good	667	30.8
Good	564	25.9
Fairly Good	326	14.9
Poor	127	5.8

I. Language Laboratory

Excellent	199	10.5
Very Good	340	18.0
Good	575	30.6
Fairly Good	472	24.9
Poor	302	16.0

J. Practical Activities

Excellent	799	36.6
Very Good	570	26.2
Good	600	27.7
Fairly Good	171	7.9
Poor	35	1.6

32. Please evaluate each of the following features of your school by placing an "X" in the appropriate column: (Check only one for each activity.)

	No.	%
A. Sports		
Excellent	503	22.8
Very Good	688	31.2
Good	550	24.9
Fairly Good	281	12.7
Poor	102	4.6
Don't Know	75	3.4
Activity Not Offered	8	0.4
B. Students' Union		
Excellent	92	4.2
Very Good	382	17.4
Good	635	28.7
Fairly Good	498	22.5
Poor	488	22.1
Don't Know	101	4.6
Activity Not Offered	11	0.5

C. General Social Activities

Excellent	53	2.4
Very Good	249	11.3
Good	624	28.6
Fairly Good	610	27.8
Poor	493	22.5
Don't Know	129	5.9
Activity Not Offered	30	1.4

D. School Dances

Excellent	115	5.3
Very Good	347	15.6
Good	541	24.5
Fairly Good	486	22.0
Poor	529	24.0
Don't Know	127	5.8
Activity Not Offered	61	2.8

E. School Clubs

Excellent	59	2.7
Very Good	234	10.6
Good	479	21.9
Fairly Good	492	22.5
Poor	415	18.9
Don't Know	361	16.5
Activity Not Offered	152	6.9

F. Overall School Spirit

Excellent	72	3.3
Very Good	206	9.3
Good	424	19.4
Fairly Good	530	24.0
Poor	914	41.3
Don't Know	45	2.0
Activity Not Offered	16	0.7

G. Preparation for University

Excellent	180	8.2
Very Good	397	17.9
Good	630	28.8
Fairly Good	430	19.5
Poor	193	8.8
Don't Know	316	14.4
Activity Not Offered	51	2.3

H. Preparation for Technical Institutes

Excellent	187	8.5

Very Good	373	17.0
Good	546	24.8
Fairly Good	400	18.1
Poor	195	8.9
Don't Know	404	18.4
Activity Not Offered	96	4.4

I. Preparation for Apprenticeship

Excellent	135	6.1
Very Good	272	12.5
Good	379	17.2
Fairly Good	312	14.2
Poor	300	13.7
Don't Know	633	28.8
Activity Not Offered	166	7.6

J. Preparation for Employment

Excellent	140	6.5
Very Good	295	13.3
Good	539	24.6
Fairly Good	489	22.3
Poor	308	14.1
Don't Know	345	15.7
Activity Not Offered	76	3.5

K. Guidance Services

Excellent	278	12.5
Very Good	326	23.9
Good	574	26.0
Fairly Good	326	14.8
Poor	270	12.2
Don't Know	111	5.0
Activity Not Offered	121	5.5

L. Library Services

Excellent	268	12.1
Very Good	551	25.1
Good	679	30.7
Fairly Good	433	19.6
Poor	248	11.2
Don't Know	18	0.8
Activity Not Offered	9	0.4

M. Cafeteria Services

Excellent	177	7.9
Very Good	311	14.2
Good	387	17.5
Fairly Good	218	9.9
Poor	220	10.0

Don't Know	103	4.7
Activity Not Offered	787	35.7
N. Classroom Activities		
Excellent	79	3.6
Very Good	282	12.9
Good	753	34.2
Fairly Good	677	30.7
Poor	312	14.2
Don't Know	56	2.5
Activity Not Offered	44	2.0

In question 33 to 36, Circle ONE answer only.

33. Have you taken the Work Experience course for credits?

	No.	%
a. Yes	171	8.2
b. No	1924	91.8

34. If you have or are taking the Work Experience course, how do you feel it has contrinuted to your education?

	No.	%
a. Very Well	113	28.3
b. Well	133	33.3
c. Some	101	25.3
d. Not at all	37	9.3
e. A waste of time for me	15	3.8

35. Have you completed or are you working on "Special Project" for credit?

	No.	%
a. Yes	275	13.9
b. No	1710	86.1

36. If you have completed or are working on a "Special Project" credits, how would you evaluate this experience?

	No.	%
a. Excellent	105	26.6
b. Quite Good	145	37.1
c. Good	94	25.3
d. Poor	24	6.1

APPENDIX "C"

SECOND STUDENT QUESTIONNAIRE (Q2) & RESPONSES

(1973)

CURRICULUM EVALUATION PROJECT

STUDENT FOLLOW UP QUESTIONNAIRE

A. For each of the course patterns in which you have taken courses, rate the extent to which you feel it has contributed to your understanding of the type of occupational activities in which you are now engaged. (If you are still a student, answer the question with respect to the type of occupational activities you want to do after you leave school.) Check only one answer per course pattern.

(showing numbers/percentages)

	RATING			
COURSE PATTERN	1 VERY WELL	2 WELL	3 A LITTLE	4 NOT AT ALL
Business Education	211/31.7	155/23.3	209/31.4	90/13.5
Technical or Vocational Education	154/24.1	166/26.0	162/25.4	157/24.6
English	287/22.2	479/37.1	394/30.5	132/10.2
Fine Arts	75/10.4	107/14.8	234/32.4	306/42.4
Social Studies	101/ 8.0	300/23.8	483/38.4	375/29.8
Home Economics	102/13.3	126/16.4	171/22.2	370/48.1
Mathematics	331/26.4	398/31.7	375/29.9	151/12.0
Industrial Arts	90/12.9	157/22.6	174/25.0	275/39.5
Science	275/22.1	313/25.2	377/30.4	277/22.3
Physical Education	186/15.5	206/17.1	362/30.1	449/37.3
Modern Languages	76/ 7.9	142/14.8	309/32.2	430/44.9

B. For each of the course patterns in which you have taken courses, rate the extent to which you feel it has contributed to your preparation for leisure time activities. Check only one answer per course pattern.

(showing numbers/percentages)

	RATING			
COURSE PATTERN	1 VERY WELL	2 WELL	3 A LITTLE	4 NOT AT ALL
Business Education	59/ 7.4	101/12.7	249/31.3	387/48.6
Technical or Vocational Education	81/12.9	128/20.4	184/29.3	234/37.3
English	260/20.3	397/31.1	386/30.2	235/18.4
Fine Arts	187/26.0	189/26.3	186/25.9	157/21.8
Social Studies	90/ 7.4	225/18.4	465/38.0	443/36.2
Home Economics	243/32.1	185/24.5	149/19.7	179/23.7
Mathematics	47/ 3.9	174/14.3	407/33.5	588/48.4

Industrial Arts	130/19.0	186/27.2	155/22.6	214/31.2
Science	69/ 5.7	232/19.3	475/39.5	428/35.5
Physical Education	496/40.1	376/30.4	271/21.9	94/ 7.6
Modern Languages	64/ 7.1	108/11.9	277/30.6	456/50.4

C. If you could start grade eleven all over again, which course pattern(s) would you now register in?

COURSE PATTERN	CHECK HERE
Business Education	683
Technical or Vocational Education	403
English	948
Fine Arts	443
Social Studies	702
Home Economics	410
Mathematics	873
Industrial Arts	364
Science	806
Physical Education	772
Modern Languages	552

D. Have you finished grade 12?

	No %
1. yes	1095/81.8
2. no	244/18.2

E. If you are not finished grade 12, do you plan to finish grade 12?

	No %
1. yes	125/52.3
2. no	49/20.5
3. undecided	65/27.2

F. If you left school before completing grade 12, or if you plan to do so, why?

	No %
1. to get a job	107/54.6
2. poor marks	9/ 4.6
3. to get married	17/ 8.7
4. financial problems	24/12.2
5. dislike for school work	39/19.9

G. Do you feel that an education is

	No %
1. extremely important	1058/79.8
2. nice to have but not essential	266/20.1
3. unnecessary	2/ 0.2

H. What is your current status?

	No %
1. high school student	81/ 6.0
2. university, College, or Institute of technology student	478/35.7
3. employed	571/42.6
4. unemployed	79/ 5.9
5. apprenticeship	38/ 2.8
6. other __________ specify	92/ 6.9

I. Who influenced you most to make the decision regarding your current status as described in question H above.

	No %
1. parents	472/35.7
2. relatives	44/ 3.3
3. teachers	45/ 3.4
4. guidance counsellor	62/ 4.7
5. friend	135/10.2
6. principal	3/ 0.2
7. other __________ specify	562/42.5

J. Which of these people would you now ask for help in deciding on a career?

	No %
1. parents	384/29.5
2. relatives	31/ 2.4
3. teacher	101/ 7.8
4. guidance counsellor	407/31.3
5. friend	86/ 6.6
6. principal	13/ 1.0
7. other __________ specify	280/21.5

K. How important is it for the school to provide students wth information to help them make an occupational choice.

	No %
1. very important	1047/78.3
2. important	264/19.7
3. not important	27/ 2.0

L. How important is it that the school prepare students for future leisure-time activities?

	No %
1. very important	509/38.1
2. important	643/48.2

3. not important	183/13.7

M. How important is it that the school prepare you with occupational skills?

	No %
1. very important	880/66.1
2. important	391/29.4
3. not important	61/ 4.6

N. Have you decided on a career?

	No %
1. yes	751/56.2
2. no	148/11.1
3. not definitely	438/32.8

O. Please rate each of the following learning activities in terms of how well they have helped you to learn.

LEARNING ACTIVITY	RATING
Teacher Lectures	
1. EXCELLENT	108/ 8.2
2. VERY GOOD	277/21.0
3. GOOD	471/35.6
4. FAIRLY GOOD	287/21.7
5. POOR	179/13.5
Teacher demonstration	
1. EXCELLENT	243/18.4
2. VERY GOOD	474/35.9
3. GOOD	388/29.4
4. FAIRLY GOOD	151/11.4
5. POOR	63/ 4.8
Class Discussions	
1. EXCELLENT	294/22.1
2. VERY GOOD	392/29.5
3. GOOD	374/28.1
4. FAIRLY GOOD	193/14.5
5. POOR	78/ 5.9
Small group discussion	
1. EXCELLENT	253/19.0
2. VERY GOOD	323/24.3
3. GOOD	342/25.7
4. FAIRLY GOOD	259/19.5
5. POOR	154/11.6

Individual projects

1. EXCELLENT	370/27.8
2. VERY GOOD	420/31.6
3. GOOD	335/25.2
4. FAIRLY GOOD	146/11.0
5. POOR	58/ 4.4

Class or group projects

1. EXCELLENT	176/13.3
2. VERY GOOD	309/23.3
3. GOOD	437/33.0
4. FAIRLY GOOD	273/20.6
5. POOR	129/ 9.7

Library research

1. EXCELLENT	165/12.5
2. VERY GOOD	281/21.2
3. GOOD	427/32.3
4. FAIRLY GOOD	299/22.6
5. POOR	151/11.4

Laboratory experiments

1. EXCELLENT	302/23.1
2. VERY GOOD	342/26.1
3. GOOD	328/25.1
4. FAIRLY GOOD	215/16.4
5. POOR	122/ 9.3

Language laboratory

1. EXCELLENT	88/ 7.9
2. VERY GOOD	188/16.8
3. GOOD	314/28.0
4. FAIRLY GOOD	274/24.5
5. POOR	256/22.9

Practical activities

1. EXCELLENT	549/42.2
2. VERY GOOD	366/28.4
3. GOOD	294/22.6
4. FAIRLY GOOD	67/ 5.1
5. POOR	25/ 1.9

P. Please rate each of the following areas of the school you last attended by placing an X in the appropriate column. (Check only one for each area.)

(showing numbers/percentages)

AREA	RATING
Sports	
1. EXCELLENT	272/21.5
2. VERY GOOD	380/30.0
3. GOOD	331/26.1
4. GOOD	213/16.8
5. FAIRLY POOR	71/ 5.7
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0
Students' Union	
1. EXCELLENT	52/ 4.2
2. VERY GOOD	164/13.3
3. GOOD	313/25.3
4. FAIRLY GOOD	364/29.5
5. POOR	342/29.5
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0
General Social Activities	
1. EXCELLENT	49/ 3.9
2. VERY GOOD	155/12.4
3. GOOD	376/30.2
4. FAIRLY GOOD	394/31.6
5. POOR	271/21.8
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0
School Dances	
1. EXCELLENT	68/ 5.7
2. VERY GOOD	172/14.4
3. GOOD	324/27.2
4. FAIRLY GOOD	330/27.7
5. POOR	298/25.0
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0
School Clubs	
1. EXCELLENT	47/ 4.4
2. VERY GOOD	132/12.3
3. GOOD	291/27.2
4. FAIRLY GOOD	286/26.7
5. POOR	314/29.3
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0
Overall School Spirit	

1. EXCELLENT	70/ 5.4
2. VERY GOOD	157/12.2
3. GOOD	244/18.9
4. FAIRLY GOOD	322/24.9
5. POOR	498/38.6
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Preparation for University

1. EXCELLENT	70/ 6.1
2. VERY GOOD	222/19.4
3. GOOD	315/27.5
4. FAIRLY GOOD	291/25.4
5. POOR	246/21.5
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Preparation for
Technical Institutes

1. EXCELLENT	91/ 8.8
2. VERY GOOD	215/20.7
3. GOOD	276/26.6
4. FAIRLY GOOD	276/26.6
5. POOR	179/17.3
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Preparation for
Apprenticeship

1. EXCELLENT	82/10.3
2. VERY GOOD	121/15.2
3. GOOD	170/21.4
4. FAIRLY GOOD	179/22.5
5. POOR	242/30.5
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Preparation for
Employment

1. EXCELLENT	63/ 5.6
2. VERY GOOD	156/14.0
3. GOOD	221/14.0
4. FAIRLY GOOD	334/29.9
5. POOR	342/30.6
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Guidance Services

1. EXCELLENT	125/10.2

2. VERY GOOD	247/20.2
3. GOOD	283/23.1
4. FAIRLY GOOD	275/22.4
5. POOR	295/24.1
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Library Services

1. EXCELLENT	152/11.6
2. VERY GOOD	331/25.3
3. GOOD	420/32.1
4. FAIRLY GOOD	280/21.4
5. POOR	127/ 9.7
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Cafeteria Services

1. EXCELLENT	83/10.4
2. VERY GOOD	170/21.2
3. GOOD	208/26.0
4. FAIRLY GOOD	176/22.0
5. POOR	163/20.4
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Classroom Activities

1. EXCELLENT	50/ 3.9
2. VERY GOOD	191/15.1
3. GOOD	429/33.8
4. FAIRLY GOOD	419/33.0
5. POOR	179/14.1
6. DON'T KNOW	0
7. ACTIVITY NOT OFFERED	0

Q. If you have taken, or are taking the Work Experience course, how do you feel it has contributed to your education?

	No %
1. very well	127/47.0
2. well	66/24.4
3. some	59/21.9
4. not at all	9/ 3.3
5. a waste of time for me	9/ 3.3

R. If you have completed, or are taking "Special Project" credits, how would you evaluate this experience?

	No %
1. excellent	87/35.5

2. quite good	87/35.5
3. good	49/20.0
4. poor	16/ 6.5
5. a disaster	6/ 2.4

S. How many months elapsed after you left school and before you had your first job. If still in school, Check response 1.

	No %
1. still in school	446/33.8
2. obtained a job immediately	513/38.9
3. less than six months	258/19.5
4. six months to one year	41/ 3.1
5. more than one year	5/ 0.4
6. never got a job explain ————	57/ 4.3

T. How much difficulty did you have in obtaining your first job? If still in school, Check response 1.

	No %
1. still in school	407/31.1
2. none	528/40.3
3. a little	240/18.3
4. a lot	87/ 6.6
5. couldn't get a job	12/ 0.9
6. Other ————	35/ 2.7

U. Who helped you find your first job? If still in school, Check response 1.

	No %
1. still in school	398/31.5
2. guidance department of your school	14/ 1.1
3. teacher	29/ 2.3
4. Canada Manpower center	91/ 7.2
5. your parents	147/11.6
6. I found it myself	584/46.2

V. Would you be willing to answer another questionnaire in two years?

	No %
1. yes	1255/94.4

APPENDIX "D"

THIRD STUDENT QUESTIONNAIRE (Q3) & RESPONSES

(1977)

ALBERTA HIGH SCHOOL CURRICULUM EVALUATION QUESTIONNAIRE

INFORMATION SECTION

In this first section we seek information about yourself since you left school. Please circle the number opposite the appropriate response.

1. What type of educational programs have you been involved in since leaving school?

	No.	%
None	163	22.8
University	212	29.7
College	116	16.2
Institute of Technology	96	13.4
Apprenticeship	48	6.7
Other	79	11.1

2. How many years of education have you completed since leaving high school?

None	239	33.7
One year	111	15.6
Two years	132	18.6
Three yeas	88	12.4
Four or more years	140	19.7

3. What is your current occupational status?

Unemployed:		
(a) activity seeking employment	38	5.8
(b) Not seeking employment	22	3.4
Student	83	42.7
Employed (fill in blanks below)	510	78.1

employed as a ___________ (job)
in the ___________ business;
industry, or service.
(include homemaking under employed)

Jobs Categorized As:

1. Professional	50	8.5
2. Semi-professional	70	12.0
3. Proprietors, Managers, Officials	72	12.3
4. Clerical and Sales	137	23.4
5. Skilled	61	10.4
6. Semi-skilled	55	9.4
7. Unskilled	119	20.3

8. Farmer	20	3.4

Business, Industry or Service Categorizes As: (Pineo-Porter Scale Values)

1. Below 30	85	16.9
2. 30.00 - 39.99	58	11.6
3. 40.00 - 49.99	131	26.1
4. 50.00 - 59.99	158	31.5
5. 60.00 - 60.99	65	12.9
6. 70+	5	1.0

4. What is your current wage bracket?

Up o $8,000	201	31.3
$8,001 to $12,000	242	37.6
$12,001 to $15,000	134	20.8
$15,001 and over	66	10.3

5. How far do you now live from the place where you received the major part of your high school education?

0 to 25 miles	454	63.5
25 to 100 miles	101	14.1
100 to 200 miles	51	7.1
over 200 miles	108	15.1

6. How satisfied are you with the present progress of your career?

Very satisfied	203	28.8
Satisfied	252	35.7
Moderately satisfied	151	21.4
Only slightly satisfied	57	8.1
Not satisfied at all	42	5.9

7. How long from the time you left school did it take you to find your first employment?

0 to 1 month	494	71.8
1 to 2 months	77	11.2
2 to 3 months	35	5.1
3 to 4 months	22	3.2
more than 4 months	60	8.7

8. Is your present vocation related to what you had planned during your high school years?

Yes	191	26.9
Moderately	125	17.6

Slightly	113	15.9
Not at all	281	38.6

9. If you left school before completing grade 12, why?

To get a job	30	27.5
Poor marks	5	4.6
To get married	17	15.6
Financial problems	6	5.5
Dislike for school work	50	45.9

10. If you were still in school, which of these people would you now ask for help in deciding a career?

Friends	81	12.5
Teacher	72	11.1
Parents	96	14.8
Guidance Counsellor	275	42.5
Principal	13	2.0
Other (Specify) ————————	110	17.0

11. If you could start grade eleven all over again, in which courses would you now register?
(Circle As Many Numbers As Necessary)

Busines Education	364	50.6
Technical or Vocational Education	232	32.2
English	386	53.6
Fine Arts	181	25.2
Social Studies	277	38.5
Home Economics	158	21.9
Mathematics	425	59.1
Industrial Arts	166	23.1
Science	362	50.3
Physical Education	323	44.9
Modern Languages	260	36.2

12. If you could start your work career again, what occupation would you chose?
A ———————— (job) in the ————————
business, industry, or service.

Jobs Categorized As:

1. Prefessional	150	29.1
2. Semi-professional	124	24.0
3. Proprietors, Managers, Officials	42	8.1
4. Clerical and Sales	86	16.7
5. Skilled	55	10.7
6. Semi-skilled	34	6.6
7. Unskilled	13	2.5

8. Farmer	12	2.3
Business, Industry or Service Categorized As: (Pineo-Porter Scale Values)		
1. Below 30	38	7.4
2. 30.00 - 39.99	46	9.0
3. 40.00 - 49.99	78	15.2
4. 50.00 - 50.99	139	27.1
5. 60.00 - 60.99	168	32.8
6. 70+	43	8.4

HOW ADEQUATELY DO ALBERTA HIGH SCHOOLS ACHIEVE THEIR GENERAL AIMS? (GROUP A)°

This section presents some of the general "aims" that have been established for Alberta high schools. (Not all of the aims are listed.)
These aims, identified by the Department of Education, are general statements of what should be learned by students. How adequately did your high school program meet these general aims for you?

Directions:
1. Consider each aim listed below and circle the appropriate letters indicating your opinions of the adequacy of your education in regards to that aim.

(Percentages)

	VERY ADEQUATE	ADEQUATE	NOT ADEQUATE	DON'T KNOW
Develop the ability to use information and counselling services related to career decisions.	3.9	35.3	55.2	5.6
Develop skills in managing natural, financial and human resources.	1.9	35.9	58.8	3.3
Develop an understanding of functions, responsibilities and achievements of various societal institutions.	3.1	51.8	42.3	2.8
Develop special interests and abilities.	13.7	48.2	36.7	1.4
Develop a positive attitude toward learning.	10.3	51.7	36.9	1.1
Develop an understanding of good physical and mental health practices.	11.2	52.8	33.2	2.8
Develop ability to apply scientific methods in the pursuit of and analysis of knowledge.	12.6	51.5	27.2	8.7
Develop an attitude of respect for public and private property.	16.5	51.5	27.7	4.2
Establish sound personal health habits.	8.9	54.2	30.7	6.1

Develop a feeling of cultural identity and heritage at national and international levels.	5.0	38.4	47.6	8.9
Develop a positive attitude toward participation in a range of leisure time activities - physical, intellectual and creative.	14.2	48.0	34.1	3.6
Cultivate appreciation for beauty in various forms.	4.7	44.1	44.9	9.2
Develop an awareness of and the ability to adjust to a changing social and physical environment.	6.4	50.4	37.9	5.3
Develop ability to adjust to the changing demands of Canadian society.	3.9	48.7	38.4	9.0
Develop an awareness of civic rights and responsibilities.	4.7	46.1	44.4	4.7
Develop intellectual curiosity and eagerness for lifelong learning.	7.8	48.7	39.0	4.5
Establish a good physical fitness program.	15.1	39.7	42.2	3.1

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[a] The thirty-four "General Aim" statements were divided into two groups. This group was mailed to one half of the sample (randomly selected), the number of returns for this group was 357.

HOW ADEQUATELY DO ALBERTA HIGH SCHOOLS ACHIEVE THEIR GENERAL AIMS? (GROUP B)°

This section presents some of the general "aims" that have been established for Alberta high schools. (Not all of the aims are listed.)
These aims, identified by the Department of Education, are general statements of what should be learned by students. How adequately did your high school program meet these general aims for you?

Directions:
1. Consider each aim listed below and circle the appropriate letters indicating your opinions of the adequacy of your education in regards to that aim.

	VERY ADEQUATE	ADEQUATE	NOT ADEQUATE	DON'T KNOW
	(Percentages)			
Develop understanding of the past, identify with the present and the ability to meet the future.	6.7	50.8	40.7	1.7
Develop an understanding of the Canadian and other forms of government.	8.4	50.4	40.7	0.8
Develop interests which will lead to a wise and satisfying use of leisure time.	8.4	32.0	58.2	1.4
Develop an understanding of the obligation and responsibilities of Canadian and world citizenship.	5.6	42.3	45.1	7.0
Develop appreciation and respect for the worth and dignity of individuals.	12.6	49.4	35.4	2.5
Develop an understanding of economic principles and responsibilities.	5.3	46.9	45.3	2.5
Develop creative self-expression through various media including the fine and practical arts.	6.4	41.3	43.6	8.7
Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences.	27.9	56.5	13.9	1.7

Develop skill in oral and written languages.	15.9	55.4	27.0	1.7
Develop a fund of information and concepts.	7.0	61.2	25.0	6.7
Develop skills of thinking and proceeding logically.	15.0	60.4	22.6	1.9
Develop ability in communicating ideas and feelings.	10.9	49.0	38.9	1.1
Develop special talents in the arts.	6.7	29.6	48.9	14.8
Learn to take into account the values of others when making personal choices.	9.3	51.8	32.7	6.2
Develop skill in understanding the communication of others.	7.3	57.7	30.0	5.0
Develop ability to organize information into meaningful categories.	6.2	66.4	23.8	3.6
Develop skills basic to the world of work.	7.5	34.4	55.6	2.5

Our School Systems Need Your Opinions - Please Continue

°The thirty-four "General Aim" statements were divided into two groups. This group was mailed to the second half of the sample (randomly selected). The number of returns for this group was 358.

HOW ADEQUATELY DO ALBERTA HIGH SCHOOLS ACHIEVE THE AIMS OF THE VARIOUS SUBJECT AREAS?

This section lists the "aims" that have been established for each subject area offered by Alberta high schools.
These aims, identified by the Department of Education, are statements of what *should be* learned by students in each subject area.
How adequately did *your* high school program meet these subject aims for *you*?

Directions:
1. Check each subject area in which you took at least one course.
2. For each subject area checked, circle the appropriate letters indicating the *adequacy of your education* in regards to each stated aim.

	VERY ADEQUATE	ADEQUATE	NOT ADEQUATE	DON'T KNOW
( ) *Art* (N=305)	(Percentages)			
To develop an appreciation of artistic design.	13.7	46.7	27.8	11.8
To develop an understanding of past and present art.	5.9	27.3	55.9	10.9
To apply artistic design principles in art and everyday living.	6.6	37.2	44.4	11.8
To develop individual artistic skills.	13.7	43.1	34.3	8.8
( ) *Business Education* (N=375)				
To develop an understanding of the operation of a business.	10.2	44.9	36.4	8.6
To develop useful business knowledge and skills.	19.5	52.8	21.9	5.9
To develop business skills of individual interest.	12.0	44.9	33.8	9.3
To develop individuality in thought and action.	7.0	40.9	42.2	9.9

To develop problem solving abilities. ..	9.1	51.9	31.2	7.8
To apply business skills to other areas.	10.2	46.1	32.1	11.6
To give practical experience in the application of business skills.	16.7	42.2	32.0	9.1
( ) Drama (N=210)				
To develop concentration.	14.3	37.6	27.1	21.0
To develop sensory distinction.	9.1	36.5	29.8	24.5
To obtain freedom and control in physical movement.	10.0	36.7	31.0	22.4
To encourage further interest in drama.	13.0	31.7	34.1	21.2
To communicate, through drama, an awareness of the current world issues. .	6.2	24.4	42.1	27.3
( ) Industrial Education (N=288)				
To develop skills for entry into an occupation.	21.3	39.5	29.7	9.4
To provide practical application of academic knowledge.	17.4	49.5	23.0	10.1
To develop basic skills to enter either a job or a post high school institution.	19.4	43.1	27.8	9.7
To develop appropriate attitudes and work habits.	18.0	49.8	23.2	9.0
( ) Language Arts (N=590)				
To develop the ability to communicate clearly in speech and writing.	15.6	56.6	26.5	0.3
To develop an understanding of language arts for personal enjoyment.	14.6	54.8	28.1	2.6
To develop a personal value system through examination of the value systems of others.	6.2	46.1	35.4	12.3
To appreciate style changes in the English language.	9.2	51.0	32.7	7.1
( ) Second Language (N=468)				

To develop an understanding of the people whose language is studied.	4.7	19.9	70.5	4.9
To appreciate the contributions of the people whose language is studied.	3.8	22.6	65.6	7.9
To understand the structure and use of the language.	11.1	56.7	26.9	5.3
To understand the language when spoken at a normal speed.	7.3	36.8	50.6	5.3
To speak the language well enough to communicate.	7.0	33.7	54.4	4.9
To read in the target language with understanding.	5.8	44.3	44.3	5.6
To write anything one can say in the language.	6.4	24.6	63.5	5.6
( ) Mathematics (N=690)				
To appreciate the contribution of mathematics to progress.	12.0	50.1	34.4	3.5
To develop precision in thought and expression.	14.6	54.4	25.8	5.2
To understand and apply mathematical operations and concepts.	20.5	55.4	22.9	1.2
To develop the ability to understand and solve a problem.	25.7	55.4	18.0	1.0
( ) Music (N=208)				
To develop an appreciation of music past and present.	14.9	32.2	35.1	17.8
To understand ways of communicating through music.	13.0	37.2	33.8	15.9
To recognize ones' own musical abilities.	17.6	38.6	27.6	16.2
To become aware of the basic importance of music in life.	13.0	40.9	28.4	17.8
To increase ones' self-confidence.	12.3	31.8	34.6	21.3
( ) Physical Education (N=660)				
To develop a strong body.	17.4	56.6	25.1	0.9

To develop recreational skills.	20.0	58.8	19.8	1.4
To develop an interest in physical activities for leisure time.	24.8	47.1	26.4	1.7
To develop the ability to get along well with others.	20.7	60.6	16.0	2.7
( ) Science (N=655)				
To understand the role of science in societies' development.	12.0	57.9	26.4	3.7
To understand moral and ethical problems in science.	5.4	41.9	46.8	6.0
To understand social problems that are either caused, or solved through science.	5.5	44.6	43.6	6.3
To understand and use scientific methods.	18.1	67.4	13.1	1.4
To learn fundamental scientific ideas. .	23.1	67.4	8.2	1.2
To develop scientific attitudes, interests, and values.	15.3	58.3	22.7	3.7
To connect scientific knowledge with covational skills and opportunities. ...	4.9	43.8	44.7	6.6
( ) Social Sciences (N=343)				
To understand basic social science concepts.	9.6	64.5	18.6	7.3
To understand modes of inquiry and skills unique to the social sciences. ..	7.0	51.9	29.9	11.1
To understand how knowledge is produced in a particular discipline.	5.6	47.8	31.0	15.6
( ) Social Studies (N=660)				
To develop an ability to choose from all known alternatives.	5.8	50.5	36.1	7.6
To defend ones' choice of alternatives.	9.5	55.0	30.5	5.0
To take action on the chosen alternatives.	5.1	49.6	37.5	7.7
To develop an awareness of values.	11.2	62.6	22.5	3.6

To choose among a variety of values. ...	9.6	59.6	26.0	4.9
To develop a consistent, defensible system of values based on those choices.	7.5	47.3	37.0	8.2
To recognize information relevant to social problems.	9.9	64.1	22.9	3.0
To use information to propose a solution to social problems.	7.3	53.0	35.5	4.1
To respond to the feelings and ideas of others without compromising individual value systems.	7.2	52.8	33.0	7.0

GENERAL SCHOOL EVALUATION

In this section we seek some general opinions about your own high school experiences.
How much do you agree with each of the following statements about your school?

(Circle one number on each line)
(Percentages)

School should have placed more emphasis on basic academic courses (math, science, English, etc.)

Agree Strongly	21.9
Agree Somewhat	34.7
Disagree Somewhat	29.6
Disagree Strongly	10.2
Does Not Apply	3.7

School should have provided more help for students who were having trouble with math, reading, and writing.

Agree Strongly	63.2
Agree Somewhat	26.0
Disagree Somewhat	5.5
Disagreee Strongly	2.4
Does Not Apply	3.0

Most required courses were a waste of time.

Agree Strongly	8.1
Agree Somewhat	24.5
Disagree Somewhat	28.9
Disagree Strongly	36.7
Does Not Apply	1.7

School should have placed more emphasis on vocational and technical.

Agree Strongly	29.6
Agree Somewhat	40.6
Disagree Somewhat	15.3
Disagree Strongly	7.9
Does Not Apply	6.6

School did not offer enough practical work experience.

Agree Strongly	48.9
Agree Somewhat	30.2
Disagree Somewhat	10.7
Disagree Strongly	4.3
Does Not Apply	5.9

School provided me with counselling that has helped me continue my education.

Agree Strongly	5.5
Agree Somewhat	17.6
Disagree Somewhat	18.3
Disagree Strongly	44.0
Does Not Apply	14.7

School provided me with counselling that has helped me find employment.

Agree Strongly	3.4
Agree Somewhat	10.8
Disagree Somewhat	14.3
Disagree Strongly	50.5
Does Not Apply	21.0

School should have placed more emphasis on subject areas that would have prepared me for leisure time activities.

Agree Strongly	15.8
Agree Somewhat	33.8
Disagree Somewhat	26.2
Disagree Strongly	16.3
Does Not Apply	7.9

Your Ideas Are Important - Please Continue

HOW IMPORTANT ARE THE GENERAL AIMS FOR THE HIGH SCHOOLS OF TODAY?°

This section seeks you opinion regarding the importance of some of the general aims for high schools.
Each of these general aims is a statement of what should be be learned by high school students.

Directions:
1. Consider each pair of aims and mark with an "X" the one aim in each pair which you consider most important for the high school of today.
2. Please do not omit any pair, even if it is difficult to make a choice.

QUESTION 1
* Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences. ....( )
* Develop an awareness of civic rights and responsibilities. ....( )

QUESTION 2
* Develop skill in understanding the communication of others. ....( )
* Develop an understanding of economic principles and responsibilities. ....( )

QUESTION 3
* Develop ability to organize information into meaningful categories. ....( )
* Develop an understanding of the Canadian and other forms of government. ....( )

QUESTION 4
* Develop th ability to use information and counselling services related to career decisions. ....( )
* Develop ability to organize information into meaningful categories. ....( )

QUESTION 5
* Develop an understanding of economic principles and responsibilities. ....( )
* Develop an understanding of functions, responsibilities and achievements of various societal institutions. ....( )

QUESTION 6
* Develop a feeling of pride in achievement and progress. ....( )
* Develop creative self-expression through various media including the fine and practical arts. ....( )

QUESTION 7
* Develop a fund of information and concepts. ....( )
* Develop ability to organize information into
meaningful categories. ....( )

QUESTION 8
* Develop an awareness of civic rights and
responsibilities. ....( )
* Develop interests which will lead to a wise and
satisfying use of leisure time. ....( )

QUESTION 9
* Develop a feeling of cultural identity and heritage
at national and international levels. ....( )
* Develop skill in understanding the communication of
others. ....( )

QUESTION 10
* Develop understanding of the past, identify with the
present and the ability to meet the future. ....( )
* Develop a positive attitude toward participation in a
range of leisure time activities: physical,
intellectual and creative. ....( )

QUESTION 11
* Develop a feeling of pride in achievement and
progress. ....( )
* Develop a positive attitude toward participation in a
range of leisure time activities: physical,
intellectual and creative. ....( )

QUESTION 12
* Develop ability to apply scientific methods in the
pursuit of and analysis of knowledge. ....( )
* Develop a positive attitude toward participation in a
range of leisure time activities: physical,
intellectual and creative. ....( )

QUESTION 13
* Develop an understanding of economic principles and
responsibilities. ....( )
* Develop special talents in the arts. ....( )

QUESTION 14
* Learn to take into account the values of others when
making personal choices. ....( )
* Develop ability to organize information into
meaningful categories. ....( )

QUESTION 15
* Develop appreciation and respect for the worth and
dignity of individuals. ....
* Develop skills in managing natural, financial and
human resources. ....( )

QUESTION 16
* Develop creative self-expression through various media including the fine and practical arts. ....( )
* Learn to take into account the values of others when making personal choices. ....( )

QUESTION 17
* Develop interests which will lead to a wise and satisfying use of leisure time. ....
* Develop a feeling of cultural identity and heritage at national and international levels. ....( )

QUESTION 18
* Develop ability to organize information into meaningful categories. ....( )
* Develop ability in communicating ideas and feelings. .( )

QUESTION 19
* Develop creative self-expression through various media including the fine and practical arts. ....( )
* Develop ability to organize information into meaningful categories. ....( )

QUESTION 21
* Develop creative self-expression through various media including the fine and practical arts. ....( )
* Develop an understanding of good physical and mental health practices. ....( )

QUESTION 22
* Develop interests which will lead to a wise and satisfying use of leisure time. ....( )
* Develop ability in communicating ideas and feelings. .( )

QUESTION 23
* Develop an understanding of good physical and mental health practices. ....( )
* Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences. ....( )

QUESTION 24
* Develop skill in oral and written languages. ....( )
* Develop skills of thinking and proceeding logically. .( )

QUESTION 25
* Cultivate appreciation for beauty in various forms. ..( )
* Learn to take into account the values of others when making personal choices. ....( )

QUESTION 26
* Develop special interests and abilities. ....( )
* Develop ability in communicating ideas and feelings. .( )

QUESTION 27

* Develop an awareness of and the ability to adjust to a changing social and physical environment. ....( )
* Develop skills of thinking and proceeding logically. .( )

QUESTION 28

* Establish sound personal health habits. ....( )
* Develop the ability to use information and counselling services related to career dedcisions. .....( )

QUESTION 29

* Develop intellectual curiosity and eagerness for lifelong learning. ....( )
* Develop an understanding of the obligation and responsibilities of Canadian and world citizenship. ....( )

QUESTION 30

* Develop skills basic to the world of work. ....( )
* Develop special talents in the arts. ....( )

QUESTION 31

* Develop the ability to use information and counselling services related to career decisions. ......( )
* Develop an understanding of functions, responsibilities and achievements of various societal institutions. ....( )

QUESTION 32

* Develop an awareness of and the ability to adjust to a changing social and physical environment. ....( )
* Develop an understanding of the obligation and responsibilities of Canadian and world citizenship. ....( )

QUESTION 33

* Develop understanding and skills in the use of numbers, natural sciences, mathematics and social sciences. ....( )
* Develop ability to adjust to the changing demands of Canadian society. ....( )

QUESTION 34

* Develop an awareness of civic rights and responsibilities. ....( )
* Develop an understanding of the obligation and responsibilities of Canadian and world citizenship. ....( )

QUESTION 35

* Develop skill in understanding the communication of others. ....( )
* Establish a good physical fitness program. ....( )

QUESTION 36

* Develop skills basic to the world of work. ....( )
* Develop an understanding of good physical and mental

health practices. ....( )

QUESTION 37
* Develop an awareness of civic rights and responsibilities. ....( )
* Develop a positive attitude toward participation in a range of leisure time activities - physical; intellectual and creative. ....( )

QUESTION 38
* Learn to take into account the values of others when making personal choices. ....( )
* Develop a positive attitude toward learning. ....( )

QUESTION 39
* Develop skill in oral and written languages. ....( )
* Develop ability in communicating ideas and feelings. .( )

QUESTION 40
* Develop skill in oral and written languages. ....( )
* Develop ability to adjust to the changing demands of Canadian society. ....( )

QUESTION 41
* Develop ability to adjust to the changing demands of Canadian society. ....( )
* Develop a positive attitude toward participation in a range of leisure time activities - physical, intellectual and creative. ....( )

QUESTION 42
* Develop skills in managing natural, financial and human resources. ....( )
* Develop skills of thinking and proceeding logically. .( )

QUESTION 43
* Develop the ability to use information and counselling services related to career decisions. ......( )
* Develop an awareness of and the ability to adjust to a changing social and physical environment. ....( )

We Appreciate Your Assistance - Please Continue

°All possible pairs (Thurstone's Matched Pairs) were presented. The 595 pairs were randomly divided into 7 groups of 42 and 7 groups of 43 pairs. Each of these groups of pairs were then presented to a 1/14th sub-sample of the total sample. This group of pairs is provided as an example.°

HOW IMPORTANT ARE THE VARIOUS SUBJECT AREA AIMS? (GROUP A)°

In this section your opinions are requested regarding the importance of the various subject area aims.
Only a portion of these aims are listed below and you are asked to indicate how important you think each aim is for the high school of today.

Directions:
1. Please circle the symbol under the phrase that best describes your opinion of the importance of each aim.

	VERY IMPORTANT	QUITE IMPORTANT	SLIGHTLY IMPORTANT	NOT IMPORTANT	DON'T KNOW
	(Percentages)				
To develop an ability to choose from all known alternatives.	62.7	31.7	5.0	.3	.3
To encourage further interest in drama.	2.8	15.4	45.4	33.3	3.1
To develop precision in thought and expression.	59.0	34.7	5.9	-	.3
To understand a second language when spoken at a normal speed.	20.4	30.4	36.0	11.5	1.7
To understand moral and ethical problems in science.	15.9	46.9	30.2	5.6	1.4
To defend ones' choice of alternatives.	52.1	39.8	6.7	.8	.6
To provide practical application of academic knowledge.	56.1	38.5	3.9	.8	.6
To take action on chosen alternatives.	43.1	47.3	9.0		.6
To develop individual artistic skills.	24.4	35.3	33.3	6.7	.3
To recognize information relevant to social problems.	23.0	54.8	20.5	.3	1.4
To develop an understanding of the					

people involved when studying a second language.	20.2	37.5	32.5	7.8	2.0
To develop individuality in thought and action.	64.4	28.6	6.2	.6	.3
To develop scientific attitudes, interests, and values.	21.8	53.6	21.8	2.0	.8
To understand and use scientific methods.	14.9	51.8	28.2	4.5	.6
To develop a personal value system through examination of the value systems of others.	32.5	42.3	18.2	6.2	.8
To communicate, through drama, an awareness of the current world issues.	3.1	14.0	46.6	30.4	5.9
To understand social problems that are either caused, or solved through science.	14.0	44.8	36.4	3.1	1.7
To develop a consistent, defensible system of values based on chosen alternatives.	35.6	42.9	16.4	2.8	2.3
To develop recreational skills.	30.2	41.9	23.5	4.2	.3
To appreciate the contributions of the people when studying a second language.	14.5	34.1	38.5	9.2	3.6
To develop sensory distinction in drama.	2.5	14.0	42.9	30.3	10.4
To develop skills for entry into an occupation.	58.0	28.9	10.9	1.4	.8
To apply artistic design principles in art and everyday living.	10.1	29.6	42.5	13.4	4.5
To develop the ability to understand and solve a problem.	81.0	17.9	1.1	-	-
To develop an interest in physical activities for leisure time.	34.7	41.2	19.0	5.0	-
To develop the ability to communicate clearly in speech and writing.	73.7	23.8	2.5	-	-
To apply business skills to other					

areas.	33.1	47.6	14.6	2.8	2.0
To respond to the feelings and ideas of others without compromising individual value system.	46.9	39.6	11.2	1.4	.8
To understand basic social science concepts.	13.4	51.3	30.5	2.5	2.2
To appreciate style changes in the English language.	7.9	31.8	42.0	15.5	2.8
To develop business skills of individual interest.	32.5	43.4	19.0	2.5	2.5
To develop an awareness of values.	69.1	25.3	5.1	.6	-

Thank You For Your Help!

°The sixty-three subject area aim statements were divided into two groups. This group was mailed to one-half of the sample (randomly selected). The number of returns for this group was 358.

HOW IMPORTANT ARE THE VARIOUS SUBJECT AREA AIMS? (GROUP B)°

In this section your opinions are requested regarding the importance of the various subject area aims.
Only a portion of these aims are listed below and you are asked to indicate how important you think each aim is for the high school of today.

Directions:
1. Please circle the symbol under the phrase that best describes your opinion of the importance of each aim.

	VERY IMPORTANT	QUITE IMPORTANT	SLIGHTLY IMPORTANT	NOT IMPORTANT	DON'T KNOW
	(Percentages)				
To read a second language with understanding.	26.5	32.7	31.6	8.7	.6
To understand how knowledge is produced in a particular discipline.	15.3	48.4	24.9	2.5	8.8
To develop appropriate attitudes and work habits.	69.1	25.8	4.0	1.1	-
To recognize ones' own musical abilities.	14.6	30.8	35.6	16.0	3.1
To inrease ones' self-confidence.	73.9	21.6	3.9	.6	-
To develop an appreciation of artistic design.	7.3	33.8	44.7	12.6	1.7
To connect scientific knowledge with vocational skills and opportunities.	29.8	44.9	22.2	1.4	1.7
To become aware of the basic importance of music in life.	6.7	23.8	51.3	17.4	.8
To develop the ability to get along well with others.	72.8	21.6	5.3	.3	-
To understand the structure and use of a second language.	21.4	32.4	36.1	9.6	.6

To develop useful business knowledge and skills.	45.7	40.9	10.9	1.4	1.1
To develop basic skills to enter a post high school institution.	49.2	39.0	9.8	1.4	.6
To appreciate the contribution of mathematics to progress.	18.3	43.7	33.8	3.7	.6
To develop an understanding of language arts for personal enjoyment.	13.2	40.6	36.7	8.7	.8
To develop a strong body.	24.4	41.9	25.8	7.0	.8
To develop concentration in drama.	3.9	10.4	44.0	35.9	5.9
To develop problem solving abilities.	53.8	37.3	8.4	.6	-
To understand and apply mathematical operations and concepts.	24.4	47.9	24.4	3.4	-
To speak a second language well enough to communicate.	30.3	30.3	28.9	10.7	.6
To use information to propose a solution to social problems.	25.7	48.0	22.3	2.0	2.0
To write anything one can say in a second language.	12.6	26.1	37.6	22.5	1.1
To understand ways of communicating through music.	4.8	15.5	48.7	27.3	3.7
To give practical experience in the application of business skills. ...	37.6	43.5	14.9	2.8	1.1
To develop an understanding of the operation of a business.	36.1	42.5	17.2	2.3	2.0
To learn fundamental scientific ideas.	21.8	47.6	26.9	3.2	.6
To choose among a variety of values.	37.9	46.6	13.1	1.2	1.2
To develop an appreciation of music past and present.	5.4	19.8	49.0	23.5	2.3
To develop basic skills to enter a job.	57.9	32.4	8.0	1.7	-

To develop an understanding of past and present art.	2.9	16.6	51.9	26.1	2.6
To obtain freedom and control in physical movement.	20.7	46.0	25.0	5.5	2.9
To understand the role of science in societies' development.	13.5	45.8	34.7	4.6	1.4
To understand modes of inquiry and skills unique to the social sciences.	15.4	38.7	36.9	3.5	5.5

Thank You For Your Help!

[a] The sixty-three subject area aim statements were divided into two groups. This group was mailed to the second half of the sample (randomly selected). The number of returns for this group was 355.